

MAY, 1934

RADIO RETAILING

INCLUDING
SERVICE
AND
INSTALLATION
SECTION

HOME ENTERTAINMENT MERCHANDISING



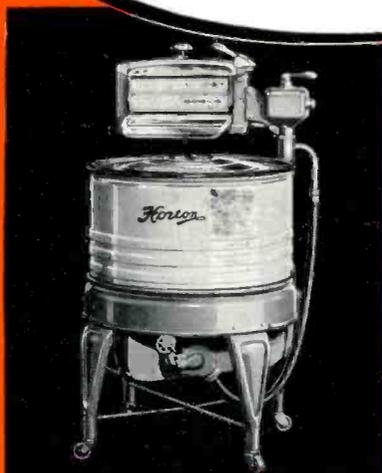
WE are pleased to announce that up to May 2nd we had received over 25,000 dealer applications for appointment as Retail Agents under the RCA Radio Tube Agency Plan ★ ★ ★ Since the keynote of the Agency Plan is . . . BETTER DISTRIBUTION — NOT MORE DISTRIBUTION . . . we must necessarily proceed carefully in the approval of Agency contracts. Even with all District Sales Offices and the Home Office Headquarters working at capacity, this process of examining and passing on applications naturally requires some time. ★ ★ ★ We ask all applicants for appointment as Retail Agents to bear with us while this arduous task is being completed.

RCA RADIOTRON COMPANY, INC.
CAMDEN ★ NEW JERSEY

By HORTON

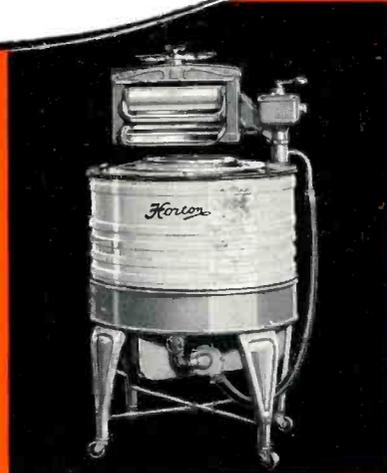
BUILDER OF AMERICA'S FIRST WASHING MACHINE

Sparkling in new beauty of line and color... with many features in keeping with Horton's 63-year reputation for advanced design and construction... *priced to give smashing emphasis to the extra value embodied in every model*... this complete new Horton line offers an outstanding opportunity for profitable sales in every section of the market. For complete information, without obligation, write now HORTON MANUFACTURING COMPANY, 504 FRY STREET, FORT WAYNE, IND.

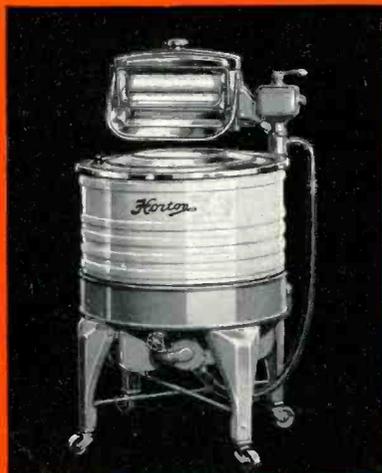


Horton No. 11—Standard size porcelain tub, partially corrugated; balloon roll wringer; 12-inch agitator, 4 wings; high speed mechanism; rubber mounted motor.

THE EXCLUSIVE HORTON 4-roll Auto-Safe Wringer (below) combines automatic safety with greater ease and efficiency in wringing. A feature of dramatic power in closing sales.



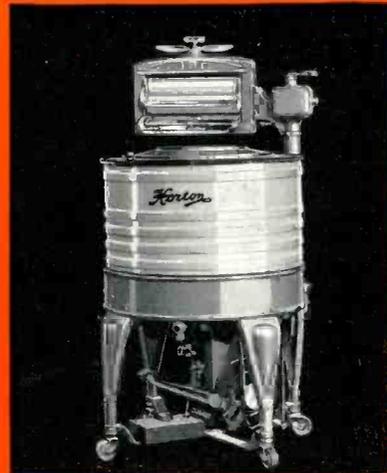
Horton No. 12—Large corrugated tub of porcelain; balloon roll wringer, top lever-release; 3-wing long stroke agitator; slow-speed mechanism; rubber mounted motor.



Horton No. 14—Oversize corrugated tub of porcelain, chromium splash ring; new balloon roll wringer, bar release; new 3-wing built-up center fin, long stroke 14-inch agitator; sealed slow speed mechanism, rubber mounted motor.



Horton No. 15—Oversize corrugated tub of porcelain, enclosed in steel jacket with insulating air-space between. Chromium splash ring and trim; 4-roll Auto-Safe Wringer; new 3-wing built-up center fin, long stroke agitator 14-inch diameter; sealed slow speed mechanism, rubber mounted motor. America's finest washer by America's first builder!



Horton No. 16—Identical with model No. 12 except powered with four-cycle gasoline engine, single cylinder, air-cooled, built-in magneto, with separate oil and gas tanks, and convenient pedal starter.

All electric models may be had with power driven drain pumps at slight extra cost.

A GOOD NAME FOR 63 YEARS

ZENITH "PERSONAL TYPE" CABINETS

Forerunners of the

YEAR'S MOST BEAUTIFUL LINE OF RADIOS

MAKE THE ZENITH COMPARATIVE TEST!

1. Place any other table model side by side with Zenith.
2. Tune in the same station on both—listen to *highs* and *lows*.
3. Turn down the volume control—compare musical *balance*.
4. NOW—turn volume controls up slowly—listen for *distortion*.
5. Compare beauty of cabinets—the heavy Zenith construction!



SHORT AND STANDARD • 3 WAVE BAND • BRINGS IN AIRPLANE CONVERSATIONS • GETS POLICE CALLS • GETS EUROPEAN BROADCASTS

The set with the greatest number of tubes scientifically housed in the smallest cabinet space



Zenith "Personal Type" Radio
Model 825 \$49.95*

Seven tube superheterodyne chassis with 6 inch extra heavy dynamic speaker and power transformer. Three-gang condenser functions on all bands: gets police, amateur, aviation and foreign broadcasts. Has tuning, tone, band switch, volume and switch controls. Shadow Dial Indicator. Cabinet features "grand piano" construction for greater beauty of tone. 8 1/2" high, 16" wide, 7 1/2" deep.



Zenith "Personal Type" Radio
Model 827 \$54.95*

Same chassis as Model 825 but with SHADOWGRAPH TUNING. Cabinet features heavy "grand piano" construction for greater beauty of tone. 8 1/2" high, 15 1/2" wide, 7 1/2" deep.

You're getting tired of *cheap* things at a *cheap* price . . . and so are all of us! The fact is that people *are* buying—and *now* they are buying quality! They are demanding *value* for their money. That's why these new Zenith "Personal Type" Cabinet Radios are due for a big reception!

Here is specific news on the two new Zenith 7 tube receivers: *fore-runners* of the Zenith line for 1934-35! Both sets have short and standard wave bands—they get police calls—airplane conversations—amateur broadcasts—90% of the foreign stations! They are housed in beautiful

cabinets. They are the type of radio enjoying the *biggest sales today!* Zenith "Personal Type" Radio gives you a *set with the greatest number of tubes scientifically housed in the smallest possible cabinet space!*

Zenith again has placed its dealers in a position to *lead the market* in sound radio value. These are *big* radios—not 4 or 5 tubes—but 7 tube receivers built as only Zenith builds quality into a radio! Inspect both of them—subject them to the Zenith Comparative Test! You'll not only sell yourself—you'll sell the customer! These *are* radio's biggest values today!

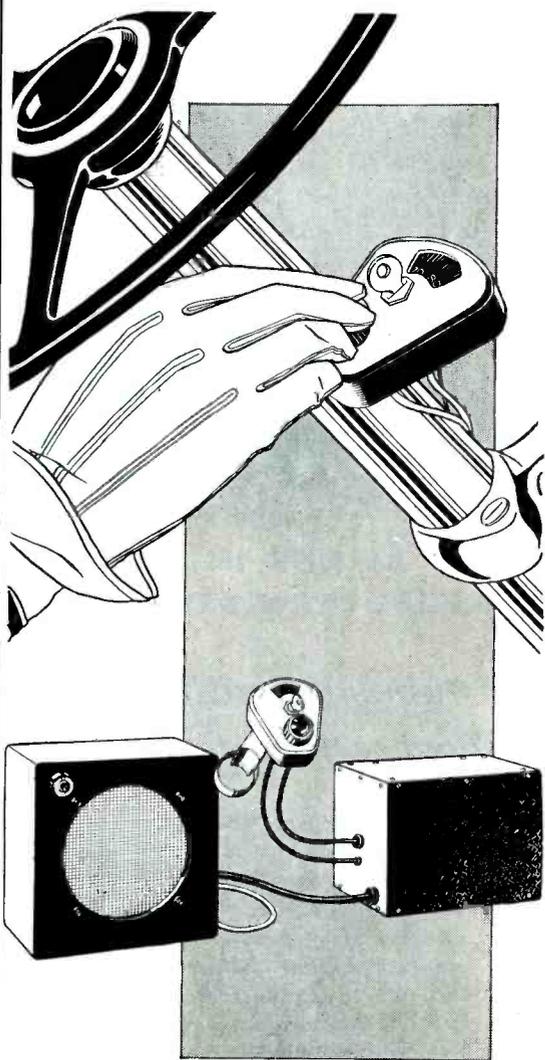
ZENITH
RADIO

ZENITH RADIO CORPORATION, 3620 IRON STREET, CHICAGO, ILL.

EXPORT DIVISION—CABLE ADDRESS: ZENITHRAD—ALL CODES

*PRICES SLIGHTLY HIGHER ON THE WEST COAST. PRICES SUBJECT TO CHANGE WITHOUT NOTICE

You will **SELL** this Automobile Radio—*because:*



NEW No. 33A Stromberg-Carlson
Automobile Radio. Price, \$79.50
(East of Rockies).

"Q" CIRCUIT AND SWITCH

When in noisy areas the improved Automatic Quieting Circuit assures minimum interference. When in the country a new "Q" Switch makes it possible to turn off the Quieting (Q) Circuit, multiply the sensitivity and pull-in stations at distances never before possible.

1. It has a *name* people want:

The name, "Stromberg-Carlson," on an automobile radio is a magnet—to the great group of people who know that it means the finest in radio reception.

2. It has *tone* quality:

Just as tone always has been the quality for which Stromberg-Carlson home radios have been celebrated, so the quality of its tone distinguishes the new Stromberg-Carlson automobile radio.

3. It gets a *host* of stations:

In a far northern Canadian camp a Stromberg-Carlson Auto Radio competing with two other makes brought in 26 stations in one evening. The best that either of the other two could do was 8 stations. Another owner reports that he tuned-in 56 stations while driving from Ithaca, N. Y. to Rochester, N. Y. This is the kind of performance that makes repeat sales for you.

STROMBERG-CARLSON TELEPHONE MFG. CO.
ROCHESTER, N. Y.

"There is nothing finer than a Stromberg-Carlson"



1894

Stromberg-Carlson



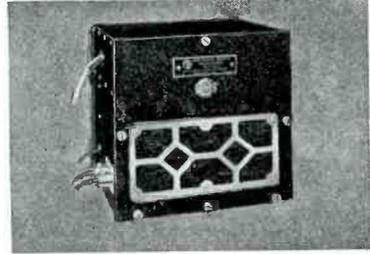
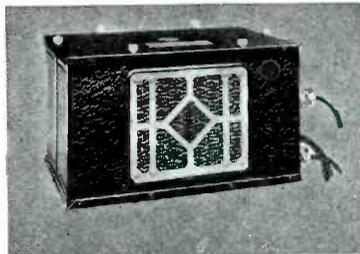
1934

MAKERS OF VOICE TRANSMISSION AND VOICE RECEPTION APPARATUS FOR MORE THAN FORTY YEARS

AMERICAN-BOSCH CAR-RADIO

PRESENTS 2 NEW OUTSTANDING PERFORMERS

There are more American-Bosch Police Car-Radios in use than any other make.

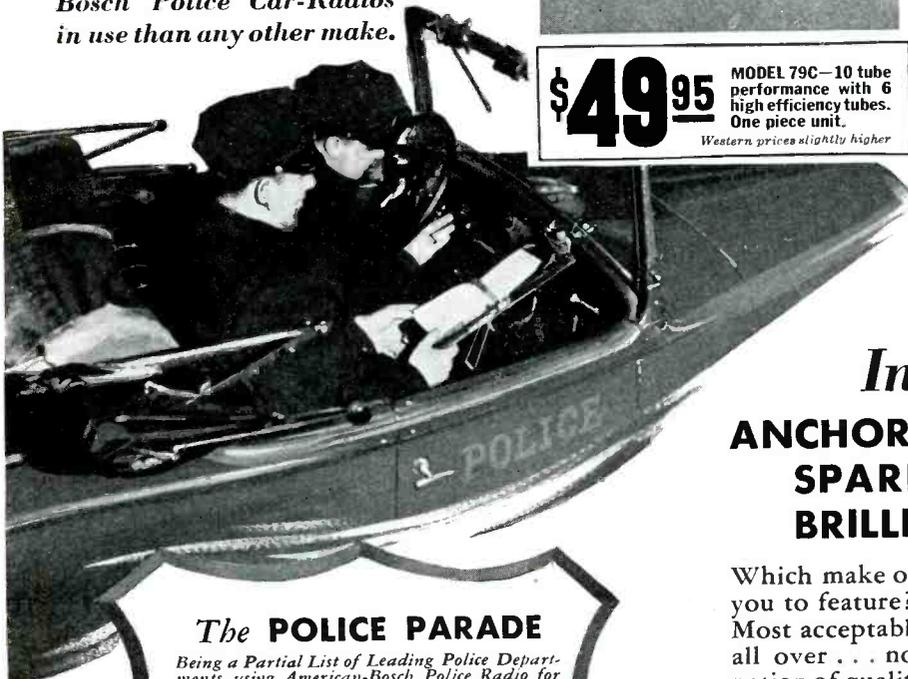


\$49⁹⁵

MODEL 79C—10 tube performance with 6 high efficiency tubes. One piece unit.
Western prices slightly higher

\$36⁹⁵

MODEL 45A—9 tube performance with 5 high efficiency tubes. One piece unit.
Western prices slightly higher



The POLICE PARADE

Being a Partial List of Leading Police Departments using American-Bosch Police Radio for War on Crime

- | | |
|----------------------|------------------------|
| Atlanta, Ga. | Pasadena, Cal. |
| Auburn, Neb. | Pittsburgh, Pa. |
| Beaumont, Texas | Pittsfield, Mass. |
| Bergen County, N. J. | Portland, Ore. |
| Birmingham, Ala. | Providence, R. I. |
| Boston, Mass. | Saginaw, Mich. |
| Cedar Rapids, Ia. | Salem, Mass. |
| Cleveland, Ohio | Salt Lake City, Utah |
| Columbus, Ohio | San Antonio, Texas |
| Dayton, Ohio | San Diego, Cal. |
| Dearborn, Mich. | Seattle, Wash. |
| Des Moines, Iowa | Sioux City, Iowa |
| Detroit, Mich. | Somerville, Mass. |
| District of Columbia | Springfield, Mass. |
| El Paso, Texas | Toledo, Ohio |
| Fall River, Mass. | Tulsa, Okla. |
| Flint, Mich. | Utica, N. Y. |
| Fort Wayne, Ind. | Montreal, Que. |
| Fresno, Cal. | Havana, Cuba |
| Holyoke, Mass. | State of Iowa |
| Houston, Texas | State of Massachusetts |
| Kalamazoo, Mich. | State of Michigan |
| Kansas City, Mo. | State of Oregon |
| Klamath Falls, Ore. | State of Rhode Island |
| Lansing, Mich. | |
| Lawrence, Mass. | |
| Los Angeles, Cal. | |
| Louisville, Ky. | |
| Miami, Fla. | |
| Muskegon, Mich. | |
| New York, N. Y. | |
| Omaha, Neb. | |

—and hundreds of other leading municipalities throughout the country

● The makers of American-Bosch products have always taken pride in creating, designing, building and selling only products that are superior to those commonly in use. Proven leaders in their fields, they are built up to a high standard of quality and not down to a price.



Introducing: ANCHORED CONSTRUCTION SPARK NOISE TRAP BRILLIANCY OF TONE

Which make of car-radio is most profitable for you to feature? Most reliable? Easiest to sell? Most acceptable to your customers? Look them all over . . . nowhere can you tie the combination of qualities found in the American-Bosch line this season . . .

The greatest car-radio performance in America: Model 79C at \$49.95—the finest car-radio American-Bosch ever built!

The lowest priced quality car-radio on the market: Model 45A at \$36.95; it has outstanding performance, reliability and eye appeal.

The greatest proof of reliability and high standards of performance: the overwhelming choice of American-Bosch Police Radio by leading state, city and municipal police departments.

The three greatest technical advances of the year in car-radio design and performance: Anchored Construction, Spark Noise Trap, Brilliancy of Tone!

Early orders exceed expectations! Insure prompt deliveries—Write or wire at once for full information!

UNITED AMERICAN BOSCH CORP.
SPRINGFIELD, MASS. - NEW YORK CHICAGO DETROIT



**6-TUBES****TONE CONTROL****AUTOMATIC VOLUME CONTROL****COMPLETE ACCESSIBILITY****SUPERHETERODYNE****REMOVABLE SPEAKER****GREATER STATION RANGE****EXTREME SENSITIVITY
AND SELECTIVITY****New Triple Control Dial**

BELMONT

The AUTO RADIO hit of the Season . . .

Enthusiastically approved—because it is outstandingly different. Many unique features: *Improved* automatic volume control; *Plug-in type*, easily replaceable vibrator unit; *Dust-proof*, plug-in type, moving coil electro-dynamic speaker; *Finger Tip* tone control; *Refined modulation* volume control equipped with lock and removable key; *Non-polarizing*—no precautions are necessary as regards grounding of positive or negative sides of car battery; *Handy* slip socket provided for renewing bulb in *new* illuminated triple control dial.

Dealers everywhere are selling Belmont Auto Radios. Model 670 shown above lists at \$39.50 complete with matched tubes, the *new* illuminated triple control dial and all accessories. They will make a *hit* with your customers.

Other Belmont Models, there are 20 in the complete line ranging from \$14.95 to \$89.50, are just as fast sellers.

Get the details of our sales plan and aids for dealers. Do it now—don't delay.



**LISTEN to the WORLD
with a BELMONT
Long and Short Wave
Receiver**

Model 775-T 7-tube Superheterodyne, one of the popular Belmont foreign and standard wave band radios, that has found such ready favor with the public. Smart looking, marvellous reception, extremely sensitive. A leader in the Belmont Line of beautifully styled radios.

BELMONT RADIO CORPORATION

1257 Fullerton Ave., Chicago, Ill. Cable Address: Belrad Chicago
Manufacturers of High Grade Radio Receiving Sets Since 1925

WHY SO MANY GOOD THINGS
ARE BEING SAID ABOUT

ARVIN Car Radio

The Arvin Car Radio sales-building program is going over in a big way with dealers and their customers because—

1 The new Arvin models are such fine car radios that demonstrations prove their superior qualities. The line includes four fine sets—5 to 9 tubes—both single and double-unit models. Each set is entirely different in design—and each is designed for a specific purpose.

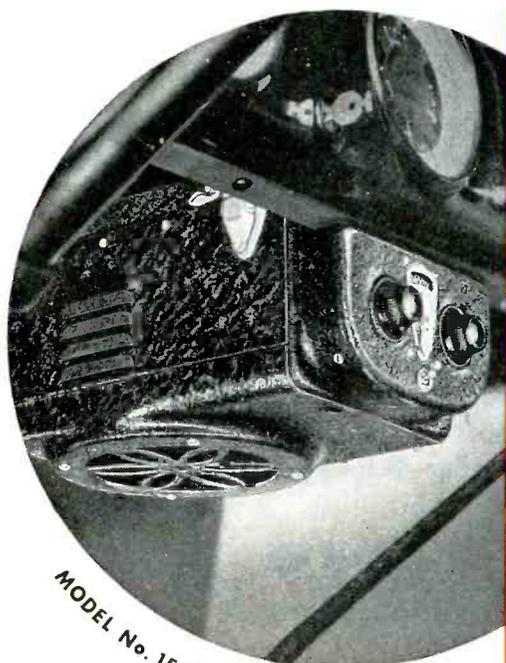
2 The Arvin line is backed by a complete advertising and merchandising program—magazines, newspapers and billboards—and a comprehensive set-up of display material and selling helps which all Arvin dealers get free of charge.

3 The makers of Arvin Car Radio are 100% automotive minded. The new Arvins were designed by engineers who appreciate perfectly the point of view of the men who install them. Each model is extremely easy to install and service.

4 The Arvin line is merchandised on a strictly jobber and independent dealer basis. Arvin also has an appreciation for the service angle and has a specific plan for handling it through authorized independent dealers.

See your jobber for full information about the complete Arvin Car Radio program which is creating so much favorable trade and consumer comment.

NOBLITT-SPARKS INDUSTRIES, Inc., COLUMBUS, INDIANA • Also Makers of Arvin Hot Water Car Heaters



MODEL No. 15 WITH DIRECT CONTROLS

THE NEW ARVIN CAR RADIO LINE

Compare the new Arvins feature by feature with other car radios. Arvins are really different.

No. 15—A 5-tube set with 6-inch speaker all contained in one metal case with direct controls on front panel. Mounts between instrument panel and dash out of the way. Fits under glove compartment of many cars without cutting out compartment. List.....**\$39.95**

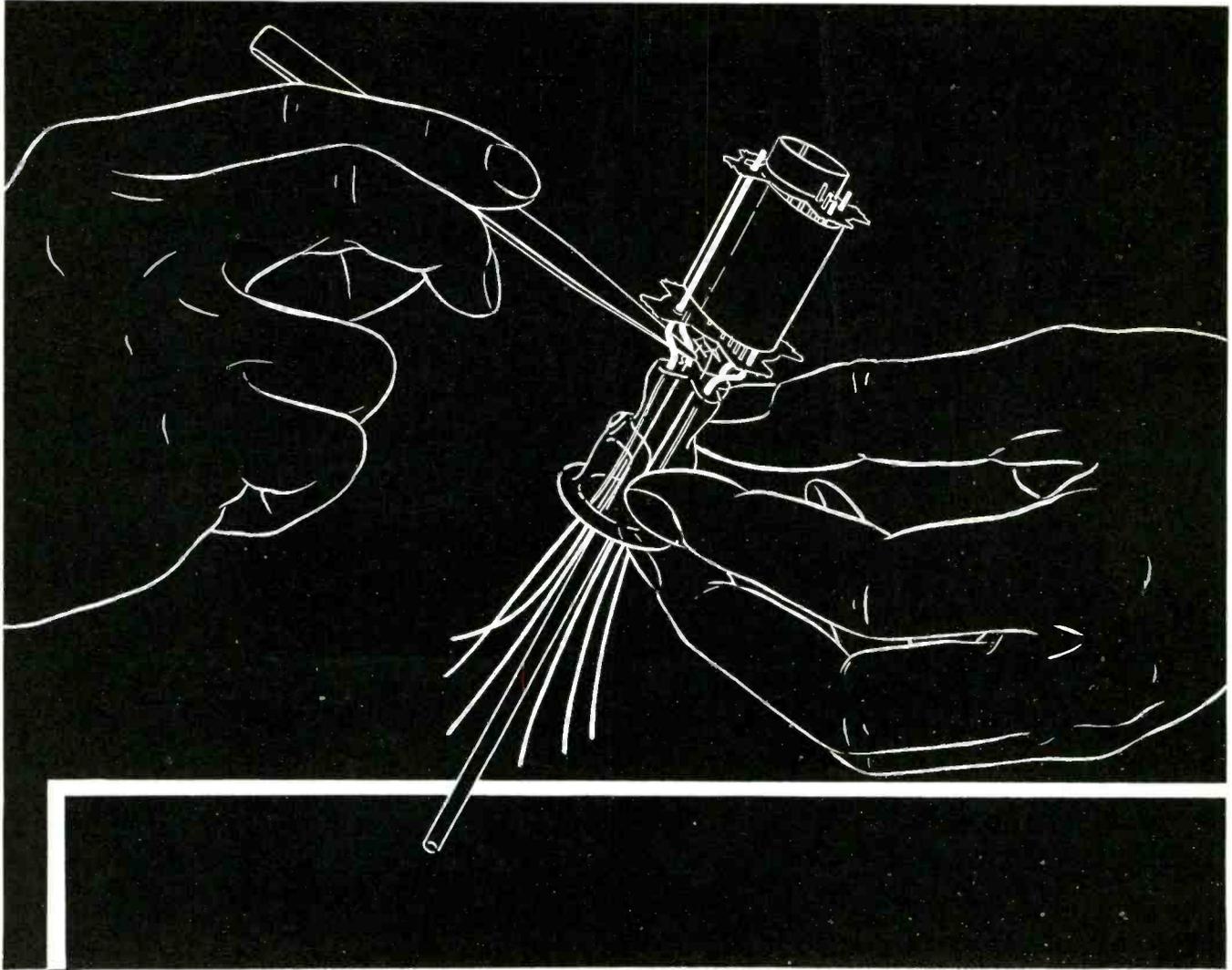
No. 25—A 6-tube single-unit set with remote control. Radio chassis, speaker and "B" power unit all enclosed in one metal case with 6-inch electro-dynamic speaker. List.....**\$49.95**

No. 35—A powerful 8-tube set that gets distant stations with beautiful tone. Double-unit construction with distinctive Arvin remote control. 8-inch electro-dynamic speaker. List.....**\$69.50**

No. 45—A deluxe set in every detail of performance and appearance. 9 tubes—10" electro-dynamic speaker. Double-unit construction. Marvelous performance and tone for fine-car owners who want the best. List.....**\$110.00**



MODEL No. 25 WITH REMOTE CONTROL



BEHIND THE FINGERS, THE PURPOSE

FINGERS can be skilful and yet fashion nothing of practical importance. They must be guided by a purpose — a vision of perfection, the desire to create something better.

It is such a purpose that guides the many manual operations in the assembling of Raytheon 4-pillar Radio Tubes. For these tubes are made by workers steeped in the watchmaker's tradition of precision. Even the machines, employed in several stages of their manufacture, are fashioned for an express purpose—the construction of the 4-pillar principle of support which holds the vital

elements in a Raytheon secure from damage through vibration.

Every operation through which the raw materials for these tubes pass, reflects that guiding purpose. The result is a tube that performs to perfection under the most rigorous circumstances. That is why police departments, air transportation companies, polar expeditions and millions of set owners everywhere, use Raytheon 4-pillar Tubes and nothing else. When you sell a Raytheon 4-pillar Tube you are assured of customer satisfaction and of a sound profit for yourself.



RAYTHEON 4-PILLAR RADIO TUBES

RAYTHEON PRODUCTION CORPORATION

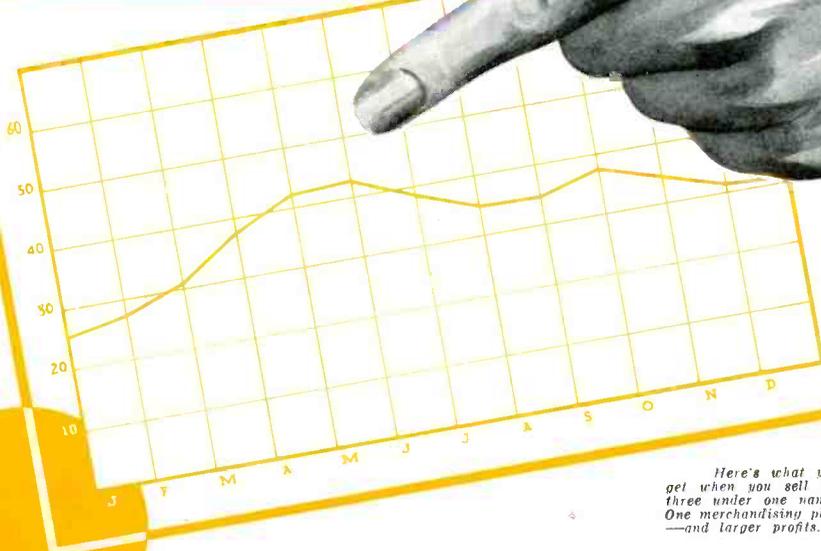
30 E. 42nd Street
New York City

445 Lake Shore Drive
Chicago

55 Chapel Street
Newton, Mass.

555 Howard Street
San Francisco

DEALERS! DISTRIBUTORS!



Here's what you get when you sell all three under one name. One merchandising plan—and larger profits.

... the future of your business may depend upon these curves!

Aren't you tired of peaks and valleys in your business? How often do you make a gratifying seasonal profit, only to see it disappear in the "slack" season? Fixed overhead in valley seasons ruins the profits of the peak days. The sales force built to sell during the "rush" season must be dispensed with for "slow" periods—and sales

effectiveness is impaired by having to start all over again each year.

Diversify? Handle more lines? That isn't the answer. For then you have divided selling—many manufacturers' names and several merchandising plans to push.

Now it has become possible for you to eliminate these costly loss-making factors in your business.

Study these seasonal (monthly) national sales curves on Radio—Refrigerators—Washing Machines. See for yourself how spotty sales on any one cuts into your profits. Then look at the large sales curve at the top of the page. Here is what you get when you handle the complete Fairbanks-Morse line. More volume! And volume sustained completely over the year. Note well that it never drops as close to the bottom—that while sales on all three are sometimes "rushing"—they are always good!

The Fairbanks-Morse distributor-dealer plan is based on profits for those who do our selling. It offers stability for your business, not only this year but for years to come. Write, phone or wire for full information. Address, Audiola Radio Company, 430 S. Green Street, Chicago, Illinois. Phone No., Monroe 1535.



NO SUPPRESSORS!

\$39.95

SIX TUBE

Every car owner can afford Audiola Model "B-6." Six latest type tubes. Sensitivity less than 1 micro-volt, absolute. Automatic volume control. Class "A" amplification giving full 3-watt output. An illuminated airplane dial with novel lock feature. Jensen built-in speaker. Built to sell quickly and serve faithfully.

The exclusive Audiola feature of no spark plug suppressors—of course. Nothing to interfere with ignition—nothing to impair car efficiency.



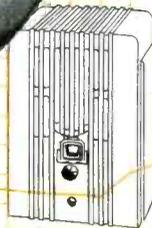
AUDIOLA

Subsidiary of

FAIRBANKS, MORSE & CO.

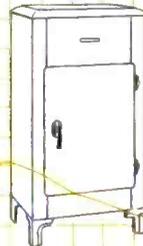
Designers and Manufacturers of Engineered Products for 104 Years

RADIOS • ELECTRIC REFRIGERATORS • WASHING MACHINES



1. RADIO The curve above shows yearly seasonal sales (all makes). Note the slow beginning of the year and the sharp peak in October.

Audiola Radios. "Known for Tone", include a complete line of auto sets, consoles, table models, all wave. Tasteful cabinets and every technical feature. There is an Audiola for every price bracket.



2. REFRIGERATOR May and June Sales come just when radio is off, then volume drops to meet the ascending sales of Radio shown above.

Carrying famous Fairbanks-Morse trademark, a complete line of electric refrigerators in all necessary sizes and finishes. Women like the appearance—they go for the interior arrangement and refrigeration engineers say "hats off" to the mechanism.



3. WASHING MACHINES

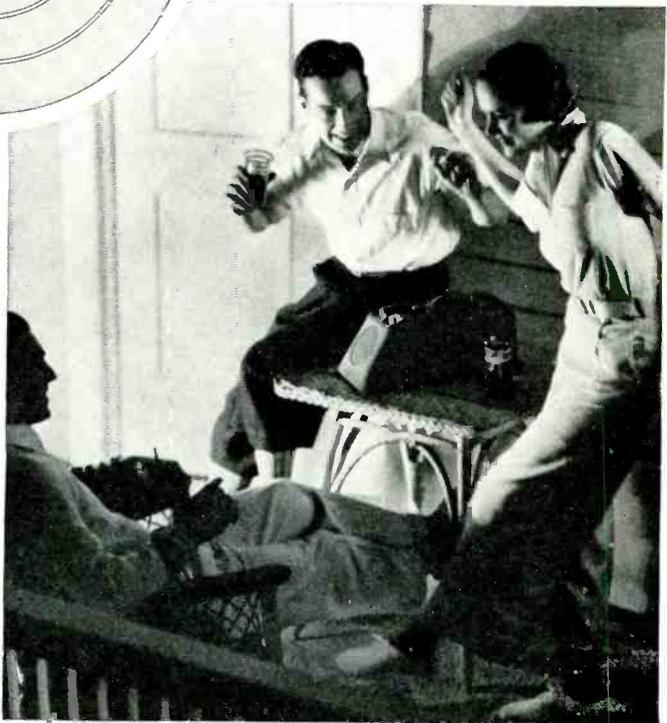
To level up the valleys further, Fairbanks-Morse adds a complete line of Washers and Ironers. Eye-catching—but with a wealth of practical features that women appreciate. Priced attractively.

Score two Bull's-Eyes

1. For introducing a new *portable* Auto Radio set packed with novelty, drama, sales and profits!



In the car, the new G-E portable set serves as a musical arm-rest. It may be used either in the front or the back seat. And when the car is put up, the set is quickly disconnected and taken indoors.



In the home, hotel or summer cottage, one simply plugs in the G-E portable set as one would an electric lamp, connects a small antenna, flicks a switch, and an evening's entertainment is available.

THE new General Electric Portable Auto Radio Set just can't help but "go places" in a season destined to break all auto radio sales records.

First—it's new! Not only new in its engineering features . . . but new in its styling, its performance, its purpose, its range of service.

For here are two radio sets combined in one—a receiver for the car and also for the home—a set that operates on car battery or alternating current.

It is being advertised — dramatically — in newspapers and magazines. Spotlighted as the leader of a new line of G-E Auto Radios that includes a new standard model that's an outstanding performer selling at a most attractive price.

Display and demonstrate the new G-E portable set. Make the G-E Auto Radio line your 1934 leader. It's packed with sales . . . at a full margin of profit.



G-E Portable Auto Radio—Model B-52—5-tube superheterodyne that operates on car battery or 110-volt 60-cycle A. C. New position in car provides ideal sound distribution. Low battery drain (under 6 amp.). Full, brilliant tone, particularly in higher registers. Factory-sealed vibrator (guaranteed for 90 days). High output and sensitivity. Dimensions: 6 $\frac{3}{4}$ inches high, 7 $\frac{1}{2}$ inches wide, 17 $\frac{1}{2}$ inches deep. Airplane-type illuminated dial. Brown streamlined case—crackle finish. Retail at \$69.50 complete. (Prices slightly higher in West, Mid-West and South. Subject to change without notice.)

The new

for GENERAL ELECTRIC

2. For sponsoring the new Installation Station Plan . . . solving the dealer's service problem!

THE only weak link in the auto radio merchandising chain now has been securely welded—by the new General Electric Approved Installation Station Plan!

It's the sort of plan that's been sorely needed since Auto Radio first brought music to the highway.

Installation and Service by Experts

It delegates the installation and servicing of G-E Auto Radios to auto radio experts . . . men qualified to do a competent job.

It insures, from G-E Auto Radios, the brilliant and dependable performance they are designed to give. And that means customer-satisfaction!

And it frees the Auto Radio Dealer from the troubles often experienced in the past and makes it possible for him to concentrate profitably on sales.

The new General Electric plan calls for the establishment of Approved Installation Stations with complete equipment and trained personnel to handle, efficiently and at low cost, installation and service for G-E Auto Radio Dealers.

Sets Serviced Free for 90 Days

An Approved Service Certificate accompanies each set, assuring the buyer of competent installation and free 90-day service from the Approved Station.

The charges for such services are most moderate . . . less than the dealer would have to spend if he did the same work himself. And part of these charges are borne by the General Electric Company and the G-E Distributor.

Those dealers, however, who have service departments adequate to qualify under the plan, may handle their own installation and service work.

Dealers—ask your G-E Distributor for details of the new 1934 G-E Auto Radio line and Approved Installation Station Plan. Or write to General Elec-



This sign identifies the Approved Station that displays it as qualified, by experience and equipment, to install and service G-E Auto Radio Sets to the satisfaction of dealer and customer alike.

tric Company, Section R365, Merchandise Dept., Bridgeport, Conn. (Service stations equipped to handle Auto Radio installation and service for dealers should apply immediately.)



"Now is the time to buy"

GENERAL  **ELECTRIC** *Auto Radio*

This NEW Emerson
**"Get a Little
 Beauty"**

Window Display . . .
 handsomely lithographed in
 full color, flashes an ap-
 pealing message no vaca-
 tion-planner can resist. It
 rivets attention on the strik-
 ing modern beauty and
 complete portability of
 Emerson AC-DC compacts.
 Set illustrated is

EMERSON Model
 330-AW

—a five-tube AC-DC super-
 heterodyne, with long-and-
 short wave range, that lists,
 complete with Cunningham
 tubes and built-in aerial, at
\$35.00
 as well as other fast-selling
 Emerson AC-DC compacts.



Emerson dealers



Left: MODEL 770
 True ALL-WAVE con-
 sole, 13 to 550 meter
 range, four sets in one,
 seven-tube superhetero-
 dyne with 12" dynamic
 speaker and A.V.C., com-
 plete with tubes, \$99.50

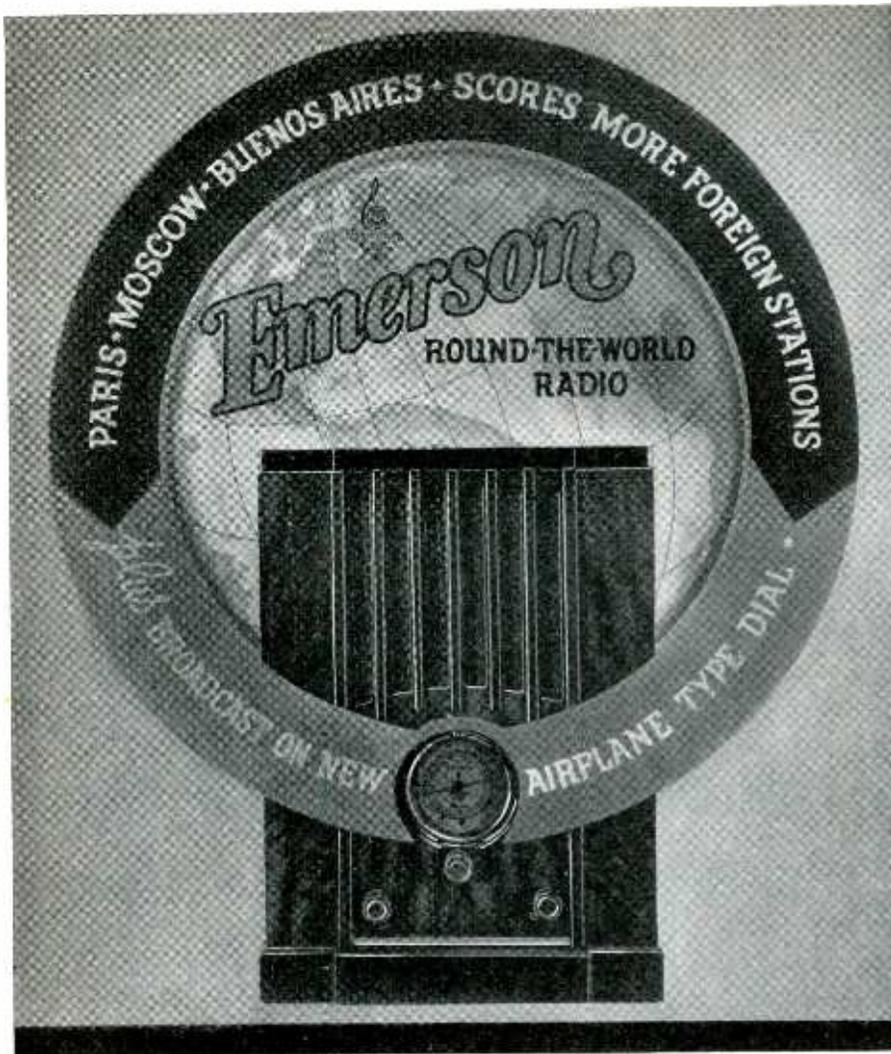
Right: MODEL 965
 Emerson Auto-Radio, six-
 tube single unit super-
 heterodyne with remote
 control and A.V.C. Com-
 plete with tubes and igni-
 tion filter system \$39.95

1. NOT ONLY

2. BUT ALSO



A COMPLETE Line . . perfectly BALANCED for dealer profits



This NEW Emerson
**"ROUND-THE-
 WORLD"**

Window Display
 beautifully lithographed in
 full color, identifies your
 store as all-wave and
 "Round-the-World" head-
 quarters. It features

EMERSON Model 39
 a five-tube reflexed super-
 heterodyne, table model,
 for AC, that covers BOTH
 broadcast and international
 short-wave, within the price
 range of a single-purpose
 set. Complete with Cunning-
 ham tubes, list **\$39.50**



Year-round best seller—
 Model 415—"World's Big-
 gest Selling Little Radio"—
 AC-DC compact—complete
 with tubes and built-in
 aerial, list **\$15.95**

get:

the most SALABLE Merchandise...

the most POWERFUL Selling Aids!

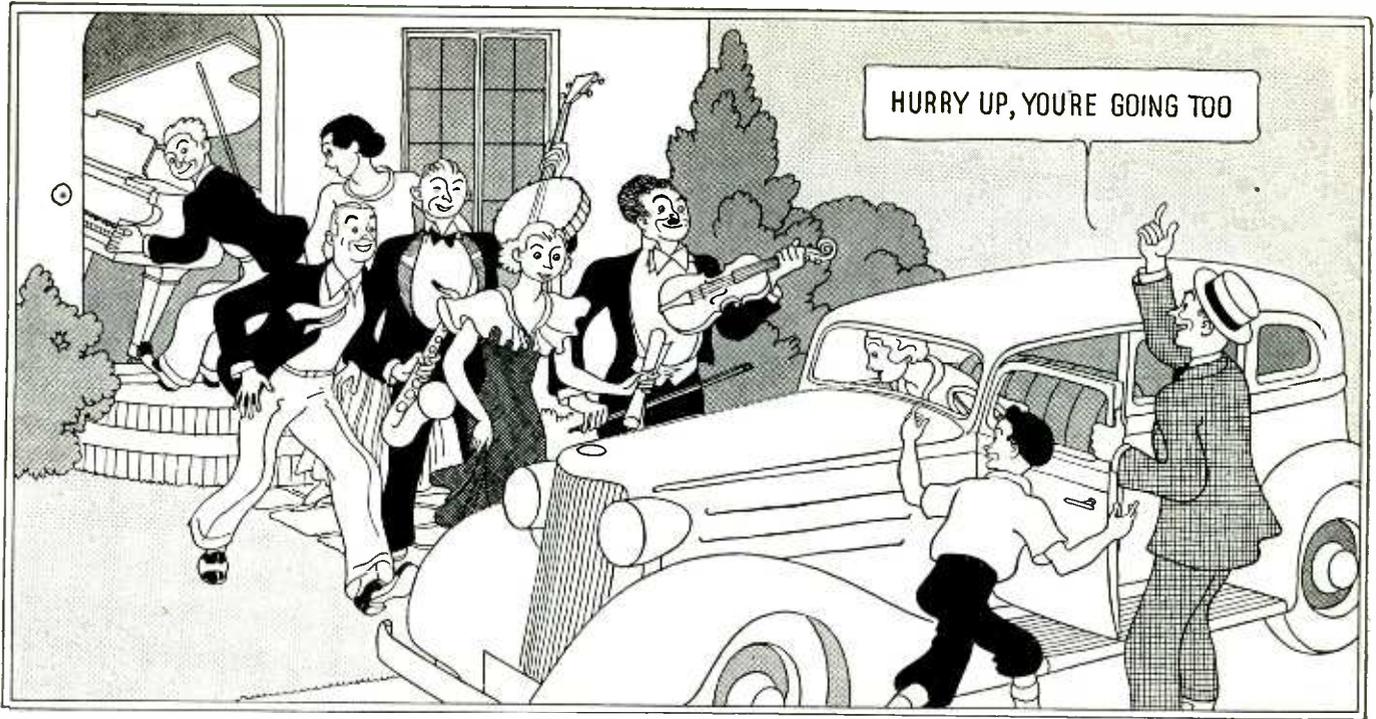
More than ever, dealers find Emerson the *ONE necessary* radio line. It's *complete* with models for every taste and purpose. It's *styled* and *priced* to *MATCH exactly* what the 1934 public *wants*. It's backed

up with displays and promotion helps that get *results* in radio's most highly competitive centers. Call your Emerson jobber today for immediate deliveries, or write direct, to

EMERSON RADIO AND PHONOGRAPH CORPORATION

111 Eighth Avenue, New York City

. . 15 Models—compacts, midgets, auto radios, consoles—\$15.95 to \$99.50



All the Stars of Radio Ride with You When There's a Sparton in the Car

Gone is the day of cheap, poorly engineered, flimsily built merchandise in the auto radio field. Car owners can't afford to buy it. Dealers can't afford to sell it.

More auto radios will be sold in 1934 than in any year in history. But the demand is for the kind of performance Sparton is offering—wonderful tone, high selectivity, substantial construction, easy installation, trouble-free service.

Of course price is important—and here

Sparton scores again, with a wide variety of models at amazing new low prices. Clean, easy business; large volume; an attractive profit on every sale.

There were 740,000 auto radios sold in 1933; conservative estimates set the figure at a million for 1934. Wideawake distributors and dealers in both the automotive and radio fields will sell them. The season is under way. Sparton is ready with the right product and the right proposition. Write or wire for details now.



\$39⁹⁵

F. O. B. JACKSON
Tax Paid

(Left) Model 333—a marvelous set at a marvelous price. An all-electric model in one compact container. Airplane green eliminator dial with "Spot o' Lite" tuning. Automatic volume control, and full sized, heavy-duty dynamic speaker specially designed for low power consumption.

(Right) Model 33A-33B—6-tube superheterodyne, all-electric, of unusual sensitivity and selectivity, bringing in distant stations with remarkable clarity. Latest double-function tubes. Built-in eliminator. Tone control. Automatic volume control. Choice of steering column or dash mounting. Extra large, heavy-duty speaker—easily removed for use with extension cord outside of car.



\$55⁰⁰

F. O. B. JACKSON
Tax Paid

THE SPARKS-WITHINGTON COMPANY {Established 1900}, JACKSON, MICHIGAN, U. S. A.

SPARTON RADIO

Radio's 
Richest Voice

(S66)

RADIO RETAILING

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VOL. 19

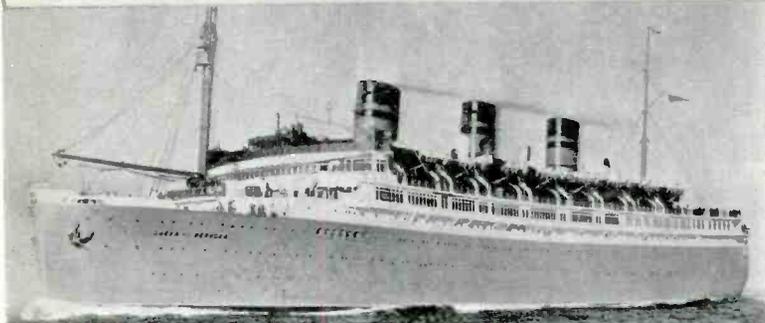
NO. 5

MAY

1 9 3 4



JOBBER SIGN CONSIGNMENT PLAN ♦ 57 eastern radio distributors attach their signatures to "W" agreements of the RCA tube agency plan at the Commodore, New York, April 2.



ANOTHER PHILCO CRUISE ♦ Bound for Bermuda and Nassau, Philco's Annual Cruise Convention is now on the high seas. Over 600 jobbers and other "oyals" on "Queen of Bermuda."



RWA CODE SIGNED ♦ General Johnson gives final approval to the code of the radio wholesalers at Washington, April 21. See next page.



TALKING BOOK ♦ An appropriation of \$100,000 by the Government makes possible talking books for the blind. Records play 18 minutes. A future item for radio dealers.

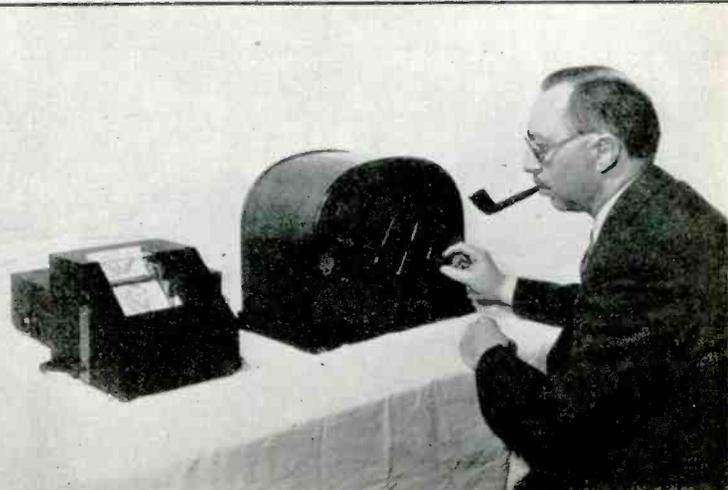


PRESS BOOSTS SW ♦ The newspapers are featuring shortwave. Here's Radio Editor Bragdon, New York Sun, at work on Saturday's supplement.

TRENDS

STABILITY, PROTECTION, PROFIT ♦ Wholesaler situation strengthened as Government sanctions RWA Code . . . Parts jobbers affiliate . . . **CLOSE HARMONY** ♦ Manufacturers and jobbers to hold joint convention at Chicago next month . . . **NATIONAL SALES CAMPAIGN** ♦ Million dollar cooperative advertising fund again up for consideration . . . **"FIDELITY" GATHERS MOMENTUM** ♦ Technical aspects receive much attention . . . Better sets to be basis for RMA campaign . . . **CONSIGNMENT SELLING** ♦ Radio Corp. perfects plan for stabilizing tube merchandising practices . . . **NEW TUBE ADMINISTRATOR** ♦ NEMA's triumvirate dissolved . . . Replaced by one-man control . . . **PRICE AGREEMENTS** ♦ Resale schedules proving popular . . . New York jobber launches "legal" price stipulation sheets which may answer the cut price problem . . . Dealers enthusiastic . . . **SHORT-WAVE** ♦ Now a permanent part of the picture "Radio Retailing's" survey discloses . . . Becomes popular overnight.

Radio Retailing, May, 1934



FACSIMILE DEMONSTRATED ♦ John V. L. Hogan demonstrates, in New York, practical facsimile for the home. Type and pictures came through clearly at ribbon speed of two inches per minute. Uses ordinary receiver on wave length just below the broadcast band. See January and April issues.

MANUFACTURERS AND JOBBERS TO CONVENE AT CHICAGO, JUNE 11-14

Joint Meetings of All Radio Interests—Will Celebrate RMA'S 10th Birthday and Signing of RWA Code with Monster Banquet

CELEBRATION of the Tenth Anniversary of the Radio Manufacturers Association and of the signing of the Radio Wholesalers Association Code will be observed next month at Chicago. The concurrent conventions of these organizations will be held at the Stevens Hotel, June 11 to 14.

There will be no trade show or merchandise displays but the entire industry is invited to participate in this 10th birthday, "family party" program which will close with a gala banquet and elaborate entertainment in the Grand Ball Room of the Stevens, Wednesday evening, June 13.

There will be many joint meetings of the manufacturing and jobbing interests to discuss national trade promotion plans and the practical problems of procedure under the various codes now applying to the radio industry.

Tuesday, June 12, the divisions of RMA will hold their annual meetings and elect officers and directors for the coming year. Likewise the wholesalers' committees will swing into action. Wednesday morning has been scheduled for the open meetings of both RMA and RWA. Wednesday night is the banquet. A Radio Industry golf tournament will take off, at the Calumet Country Club, Thursday morning.

Stimulation of radio business will be the keynote of these conventions. Because of the present lively interest in the newer sets, the bright outlook and the actual evidences of constructive cooperation between all branches of the trade, it is felt that next month's gathering at the Stevens should prove highly profitable.

A feature of the birthday celebration

will be a "Presidents Dinner" tendered by President Williams to all past presidents, directors and officers of the Radio Manufacturers Association. Paul B. Klugh, of Chicago, will preside over the destinies of the Wednesday night banquet.

JOBBERS' CODE DETAILED TO RMA DIRECTORS

During consideration of the various NRA code matters by the RMA directors at their meeting April 18 at Chicago, the new supplemental code for radio jobbers was outlined by a committee of the Radio Wholesalers Association. Ben Gross and David Trilling of New York, RWA directors, and H. G. Erstrom of Chicago, executive vice president of the RWA, appeared before the RMA Board and discussed the great improvements in radio merchandising expected to follow from the jobbers' supplemental code.



PAUL KLUGH
Toastmaster Extraordinary

Just like the good old days: RMA Convention at Chicago this June, winding up with monster banquet at the Stevens . . . and Paul Klugh, master-presider and spirit of suavity, in the toastmaster's chair, per usual

PROGRAM OF EVENTS

MONDAY, JUNE 11:

- 10:00 A.M.—Meeting RMA Board of Directors.
- 12:30 P.M.—Luncheon, RMA Directors.
- 7:00 P.M.—"Presidents Dinner" to past RMA Presidents, Directors and Officers.

TUESDAY, JUNE 12:

- 10:30 A.M.—Joint Meeting of RMA and RWA, manufacturers and jobbers.
- 2:00 P.M.—Meeting, RMA Set Division, *Chairman Arthur T. Murray.*
- 2:30 P.M.—Meeting, RMA Tube Division, *Chairman S. W. Muldowny.*
- 3:00 P.M.—Meeting, RMA Parts and Accessory Division, *Chairman Leslie F. Muter.*
- 3:30 P.M.—Meeting, RMA Amplifier and Sound Equipment Division, *Chairman Richard A. O'Connor.*

- 2:00 to 5:00 P. M.—Meetings RWA Divisions, Committees.

WEDNESDAY, JUNE 13:

- 10:00 A.M.—RMA Membership Meeting, 10th Annual Convention. Reports of RMA Division and Committee Chairmen. *Presiding, President Fred D. Williams.*
- 10:00 A.M.—Radio Wholesalers An-Chairmen. *Presiding, President James Aitken.*
- 2:00 P.M.—Meeting, new RMA Board of Directors.
- 2:00 to 5:00 P.M.—Meetings, RWA Divisions and Committees.
- 7:00 P.M.—"Radio Industry" Banquet, *Presiding Paul B. Klugh, Chairman Convention Arrangement Committee.*

THURSDAY, JUNE 14:

- Radio Industry Golf Tournament, Calumet Country Club.

National Sales Campaign to be Discussed Next Month

Mr. Trilling presented the five-point program of the RWA for national promotion of radio sales, which will be discussed at the joint conventions of the RMA and RWA at Chicago in June.

Powel Crosley, of Cincinnati, A. Atwater Kent, of Philadelphia, and E. T. Cunningham of New York, were appointed a special RMA committee to confer with the jobbers on national trade promotion.

Cooperation with the broadcasters, the raising of a treasury fund for publicity purposes, how to feature the new types of sets are on the program.

To effect coordinated action on NRA code matters and future policies, another special RMA committee, including W. S. Symington, of New York, A. T. Murray, of Springfield, and James M. Skinner, of Philadelphia, were appointed to cooperate with a similar RWA committee.

RMA DEFINES "ALL WAVE" SETS

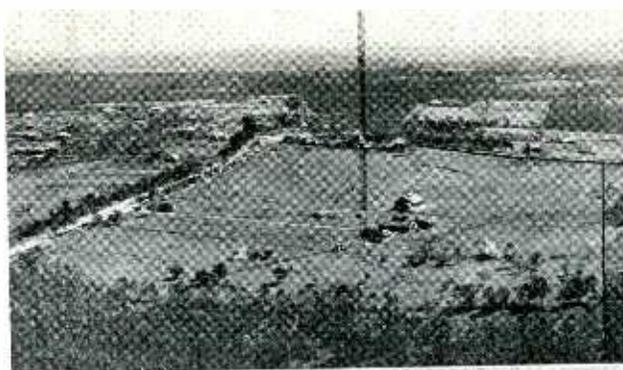
Nomenclature and frequency ranges for the standard broadcast receiving set, the "all wave" receiver and the "standard and short wave," or "dual wave" receiver, were adopted by the RMA Board of Directors, April 18 at Chicago, following recommendations from the Association's Engineering Division.

The "standard broadcast" receiver is defined to include sets having the regular frequency range from 540 to 1,500 kilocycles.

The definition of the "all wave" receiver applies to sets with frequency ranges from 540 kilocycles to at least 18,000 kilocycles.

The "standard and short wave," receiver as defined by the RMA will apply to sets having frequencies between 4,000 and 20,000 kilocycles with a short wave range covering a ratio of maximum to minimum frequencies of at least two and one-half to one.

The definitions outlined above were adopted by the RMA Board as the simplest possible to correctly advise the buying public and the trade. Detailed standards defining the nomenclature and frequency ranges of the three types of receivers will be issued soon by the RMA Engineering Division.



Popular
DX-ers



Here's the "works" of VK3ME, Melbourne, and the 400 ft. tower of VK3ME. Sydney, two popular Australian shortwavers heard regularly in the wee, small hours by American listeners. Owned by Amalgamated Wireless. The first is on 31.28 meters, weekends, while the second operates on 31.54 each Wednesday from 8 to 9:30 p.m. and from 8 to 10 p.m. Saturdays, eastern Australian standard time.

PRICE SCHEDULE AGREEMENTS INSTITUTED IN NEW YORK CITY

Bushwick-McPhilben, Sparton Jobber, Reports Enthusiastic Dealer Response — Legal, Under the Code, It is Claimed

THE enthusiastic reception which has been accorded the announcement by the Bushwick-McPhilben Corporation, New York City, of its resale price policy agreement reached a new "high" when, April 26, the Bronx Radio Merchants Association, by the unanimous vote of the 36 dealers attending, endorsed this plan and agreed to stock the line handled by this jobber and to sell it only at scheduled prices.

"Our members have been looking for this type of jobber backing for ten years," declared John J. Shaneck, president of this association. The action we took proves that the large majority of radio retailers, even in neighborhoods where price gyping has long prevailed, do not want to sell below a reasonable profit level but that they must have the courageous and trustworthy support of their wholesaler—and manufacturer—in order to meet this kind of competition. Given this support, 90 per cent of the radio merchants in the country will welcome with open arms any jobber-dealer price agreement that has teeth in it and that they believe will be enforced to the letter. Bushwick-McPhilben, I understand, consulted some of the most eminent legal talent in the country before drawing up this new resale contract—going to Washington for advice as well as securing the counsel of two New York lawyers."

Actually, the Bushwick-McPhilben contract with its dealers is not startlingly new. The punch lies in the fact that there has been put in effect a signed document which provides that Sparton radios and refrigerators will be delivered only to those retailers who agree to sell them only at the resale prices stipulated by the distributor. Thus standardized consumer prices are established throughout the New York metropolitan territory, with the knowledge that this agreement, under the new "deal," has legal approval and will be enforced.

This agreement is predicated upon the National Recovery Act, the New York State act supplementing the NIRA in intra-state commerce and, now, upon the approved RWA Code. The decisions in the New York State "Milk" case and in the recent "Spotless Dollar Cleaners" case, upholding provisions of these two former acts, also influenced the formulation of this plan. The fact that there is a wide difference in merchandising conditions between specialty, one-sale items which must be pioneered and general commodities such as sugar, is being more and more recognized and the trade-mark rights of manufacturers and jobbers are receiving the protection of the courts and are acknowledged as entitled to certain price protection safeguards. The most recent instance is that of the price protection clauses in the approved bookseller's code.

President Victor Meyer, of Bushwick-McPhilben, points out that these price restrictions apply specifically to the branded products of a single manufacturer—in open competition with similar products of other manufacturers; that there is no agreement among competitors, such as the Anti-Trust

Act was intended to prohibit. Furthermore, there are ample provisions by which the restrictions of the contract may be lifted in case any dealer finds that he cannot dispose of his stock of Sparton products at the prices set. "First, however, he must offer his stock to us before demoralizing the market for our other dealers."

Further evidence that the Bushwick fair trade agreement may be the forerunner of many more, is seen in the fact that numerous requests for full details have been received from competing jobbers in the East.

Service Men Schedule Prices

That price agreements are not confined to jobber-dealer relationships is seen in the recent action of the service men of northern Kentucky. Claiming the protection of the general retail trade code and securing the signatures of 85 per cent of the servicemen in this area, a schedule of minimum radio service charges is now in force. This schedule, mimeographed on the letter head of the Retail Trade Code Authority, Covington, Kentucky, establishes outside service calls (minimum charge) at \$1.50 and a minimum bench charge of 75c. an hour for labor.

Similar action by service men in the adjacent Ohio counties is anticipated.

PRICE REPORT

WASHINGTON, D. C.—*Special to "Radio Retailing," April 23.*—Four cabinet officers, sitting, through their experts, on a special presidential committee to determine whether the Government should have a policy on prices and if so, what it should be, have recommended to the White House that additional studies, outside NRA, be made of the working of the price control
(Continued on page 19)

DISTRIBUTIVE CODE APPROVED

General Johnson Affixes Signature April 21 — Climaxes Months of Arduous Effort — Should Prove Beneficial to Entire Radio Industry

OFFICIAL Governmental approval of the "Supplemental Code of Fair Competition for the Radio Wholesaling Trade," April 21, and its enforcement, effective as of Tuesday, May 1, marks another step forward in radio's progress. Already it has been instrumental in bringing closer together the set makers and the wholesalers. It has, indirectly, lent courage to certain distributors who are now enforcing common sense policies for the protection of their dealers. Its effect in solidifying the jobbing structure already is apparent in the flood of applications for membership in the RWA.

Important Clause Provides for Creation of a Trade Practice Committee

The Code contains a very important provision for the creation of a Trade Practice Committee, the duties of which are to meet with a similar committee to be appointed by the manufacturers and by the retailers. They are to promulgate recommendations to the administrator for the creation of Code provisions for manufacturers and for retailers as well as any necessary changes in the Wholesale code, all with a view of aiding the proper stabilization of the industry.

Quoting Chairman Benjamin Gross:

"It is considered that this is one of the most important clauses in the Code and it is hoped that the full advantage will be taken of the opportunity offered. Both the Radio Wholesalers Association and the Radio Manufacturers Association have already created their Trade Practice Committees."

Interpretation of the Code

After stating the purposes of the code and defining the terms, "radio apparatus," "wholesaler," "the Trade" and the "dealer," the code sets up the following administrative bodies:

ARTICLE II

(e) The Radio Wholesalers Association, Inc., hereinafter called the RWA, is defined to be the National Association of Radio Distributors which is sponsoring this Supplemental Code.

(f) The term "District Agency" as used herein, is a body authorized by the Divisional Code Authority to represent it in the various geographic districts in the manner provided in Article III.

(g) The term "Divisional Code Authority," as used herein, shall mean the Divisional Code Authority for the Radio Wholesaling Trade, a division of the Wholesaling or Distributing Trade.

ARTICLE III—ADMINISTRATION

Section 1—(a) The Divisional Code Authority shall consist of 12 members of the Trade: one to be the President of the RWA; one to be the Executive Vice President of the RWA; seven to be chosen by the Board of Directors of the RWA, to represent its members in various geographical sections of the country; and three to be chosen from members of the Trade who are not members of the RWA, in a manner to be approved by the Administrator.

Clauses (b) and (c) relate to the increase or contraction of the number of members and to their removal and replacement for cause.

Section 2 defines the powers and duties of the Divisional Code Authority. (a) To elect officers, appoint sub-committees, organize District Agencies; (b) To regulate the use of the Code Insignia; (c) To make recommendations for the modification or

For Your Copy of the Wholesalers' Code

Write to the Radio Wholesalers Association, 185 North Wabash Avenue, Chicago, Illinois. Every radio jobber should join the RWA at once.

amendment of the RWA Code and (d) To appoint a Trade Practice Committee, ". . . to govern the relationships between production and distribution employers . . ."

Section 5 provides a unique and practical system of local administration by District Agencies. It reads:

(a) District Agencies shall consist of not less than three members of the Trade operating within each trading area involved. The same proportion of members of the Trade not members of the RWA shall be selected to membership in each District Agency as are on the Divisional Code Authority, provided that at least one non-member of the RWA shall be selected to membership in each such Agency and provided, further, that this provision shall not prevent adjusting the selection of a District Agency in such a manner that it shall be representative of the members of the Trade in a particular district where a representative number of such members of the Trade may not be members of the Radio Wholesalers Association.

At present the Code Authority has tentatively in mind 51 such national subdivisions. However, this number will be increased or decreased as conditions warrant.

ARTICLE IV, TRADE PRACTICES

Section 1 warns against subterfuge; in effect that it shall be an unfair practice for any member of the Trade to attempt to avoid the provisions of this Code. Section 2 states that members of the Trade (radio industry) shall not discriminate between dealers—either in services rendered or in discounts or net prices extended; "provided that nothing herein shall prohibit quantity discounts."

Section 3, clause (a) "Selling Below Cost" is reproduced in its entirety. It reads:

It is considered an unfair method of competition and inimical to best public interest for any member of the Trade to sell any item below cost except as permitted in paragraph (b) of this Section. Cost, for the purposes of this Section, shall be the net invoice purchase price, plus transportation charges to the wholesaler's warehouse, and, when ascertained by the Administrator, upon the recommendation of the Divisional Code Authority, to include a reasonable amount for direct labor costs entailed in the sale and delivery of the merchandise and the collection of accounts by the member of the Trade.

Clause (b), the exception referred to in clause (a), requires that "dropped lines," surplus stock or "close-outs" may be moved at below cost prices provided, ". . . such stock must first be reported to the District Agency at least two weeks prior to the offer of sale." Such stocks to be fully listed, quantities and minimum acceptable prices and reason for sale. The District Agency must approve such sales.

Clause (c) covers terms and cash discount stipulations—2 per cent for cash, net 30 days—with certain special provisos. Clause (d) requires that should any District Agency find that a two-thirds majority of all members of the Trade in its district desire to file their price schedules, the District Agency shall require of all the members of the Trade operating in its district to file with it their schedule of prices, discounts, terms and all allowances. "It shall be an unfair trade practice for any member of the Trade to sell or offer for sale goods at prices lower than those which he then has on file."

Clause (e) covers the matter of rebates and subsidies, prohibiting the offering of pay premiums, bonuses, subsidies or the paying of any of the operating expenses of a dealer's business for the purpose of favoring a special product—"nor pay for local dealer advertising or sales promotion plans beyond the amount set forth under Sections 4 and 5 of this Article."

Sales Promotion

Section 4 permits the carrying out of sales promotion plans, with the approval of the dealer, if available to all on equal terms and provided that the amount so expended by the member of the Trade shall not exceed one per cent of his total net sales to his dealers on radio apparatus within the current fiscal year of the member of the Trade.

Section 5 provides that the distributor shall not contribute to the cost of cooperative, manufacturer-distributor-dealer, advertising in excess of the amount contributed by the manufacturer or the dealer, nor more than one-fourth of the total cost of such advertising. Written statements of the dealer's advertising rates must be submitted to the jobber. The District Agency may require from the members of the Trade a statement of current advertising agreements with dealers. Jobbers shall have the right to supervise all advertising done under their cooperative advertising agreements.

Rules of Fair Advertising

We regret that space does not permit printing in full the four requirements of fair advertising. The prices of the set, if quoted, must include a complete set of tubes, and if not those originally supplied with the set the brand must be stated.

Illustrations must portray the model advertised. Misleading or ambiguous statements regarding performance, trade-in allowances, terms are prohibited in any

types of advertising or publicity whatever.

Section 6 deals with warranties. It reads:

On new merchandise which is found to be defective or where error has been made in design or manufacture, the distributor shall give the dealer the benefit of the manufacturer's standard warranty, and, in addition thereto, whatever provisions the manufacturer makes for additional compensation and/or expenses covering the replacement of such defective parts or apparatus.

The Divisional Code Authority within 90 days is to make recommendations pertaining to regulation to the distribution and sale of tubes.

The Divisional Code Authority is setting up a separate division for parts distributors and regulations covering the sale and distribution of parts and accessories will be promulgated by that section, subject to the approval of the Code Authority.

RWA CODE ADMINISTRATION CENTERS BEING SELECTED

The various cities where trade associations now exist are being contacted by the Executive Office of the RWA to determine which distributors in each territory are acceptable for appointment to the District Agency.

The appointments will be announced within the next few weeks in most of the trading areas. In such cities as Boston, New York, Albany, Philadelphia, Pittsburg, Washington, Atlanta, Jacksonville, Louisville, Cincinnati, Cleveland, Des Moines, Chicago, Milwaukee, Detroit, Oklahoma City, Omaha, Minneapolis, Denver, Seattle and San Francisco, the creation of the District Agency is already under way.

A Tribute to Ben Gross



We welcome this opportunity to publish a word of appreciation, on behalf of the industry, concerning a man whose vision, ability and persistence in the face of criticism and whose unselfish giving of time, energy and money has been largely responsible for the Radio Wholesalers Code.

Since June, 1933, Benjamin Gross, of New York City, has worked long and earnestly to help formulate a practical, constructive code of fair practices designed to bring profit not only to the radio jobbing interests but to dealers and manufacturers.

RWA Directors Elect Temporary Code Authority

Meeting in Chicago last month, the Board of Directors of the Radio Wholesalers Association elected the following temporary code authority: Chairman, Benjamin Gross, New York; David M. Trilling, Philadelphia; Francis E. Stern, Hartford; James E. Aitken, Toledo; H. G. Erstrom, Chicago; Harold J. Wrape, St. Louis; Al. Meyers, San Francisco; A. C. Marquardt, Boston, and Lawrence Lucker, of Minneapolis.

The code authority will proceed to

In its approved form the Radio Wholesalers Code does not, however, represent one man's judgment, comprehensive as it has been. Rather it represents the collective thinking of the many leading distributors and set makers who have freely been consulted. Mr. Gross has been ably assisted by the code committee of the Radio Wholesalers Association. This committee has gone out of its way to grant opportunities for all who wished to be heard. But without the zeal and leadership of this one man it is doubtful if the radio trade, today, would have a code—an instrument for progressive merchandising characterized by Administrator Alexander as one of the best resale codes yet submitted.

Only those who have labored with Ben Gross these many months can appreciate the work involved and the many obstacles encountered and overcome.

Credit where credit is due. And may every radio jobber in the industry get behind this code, abide by its provisions, affiliate with the authorized code administering organization—the Radio Wholesalers Association—and help carry the burden of its enforcement.

organize, appoint committees and District Agencies and otherwise fulfill its legally established functions in accordance with the provisions of Article III, Section 2.

Trade Practice Committee

One of the most important committees established by the Radio Wholesalers Association during its entire period of existence is that of the newly created Trade Practices Committee. Benjamin Gross, of New York City, was appointed chairman. Members are: David Trilling, Philadelphia; David Goldman, New York City; Irving Sarnoff, New York City, and Harry Alter of Chicago.

This committee will meet in the near future with the Trade Practice Committee of the Radio Manufacturers Association, recently appointed at the request of the RWA. It is felt that much constructive action for the benefit of the entire radio industry can be secured by this cooperation.

Likewise a Tube Committee

A committee to study the merchandising of radio tubes also was created by the RWA directors. Sanford Samuel, of the Samuel Sanford Company, jobbers, New York City, is its chairman.

The Tube Committee will make recommendations to the RWA which may result in the creating of a Tube Division. The Tube Committee will figure prominently in the work of the Code Authority inasmuch as the Radio Wholesalers Code specifically provides for regulations regarding tubes, to be created within 90 days following the adoption of the Code.

Two New Directors

Al Meyers, of Leo J. Meyberg, San Francisco, and Harry Alter, of Chicago, have been elected directors of the RWA to fill unexpired terms. Mr. Meyers is a newcomer to the board, while Mr. Alter is a past president of the association and has been an active director and worker since it was organized.

What the Well Dressed Antenna Shelves Should Wear



Russ Sceli, Hartford, Connecticut, finds that ample variety of stock is half the sales battle—especially when pioneering a new idea. His customers just take it for granted that an antenna job is part of every installation picture—after viewing this impressive display of noise reducers



Gets First A-R Installation Station Under New GE Plan

P. O. Briggs, head of the Radio Sales and Service Co. Inc., of Providence, R. I., and his personnel, receive the first appointment as a GE auto-radio approved installation station. Adhering strictly to installation and service work, this firm has won the esteem of all GE auto radio dealers

GE's Auto-Radio Service

A plan for the establishment of approved auto-radio installation stations all over the country for handling the installation and service of its receivers has been put into operation by the General Electric Company, Bridgeport, Conn. The purpose is to relieve dealers of the necessity for maintaining the special equipment and personnel necessary for this work, and to give the purchaser greater assurance of satisfaction.

This plan will not affect the larger dealer who can and does operate his own qualified service department.

Under the terms of the plan, GE shares the cost of service work with the dealer, the approved service station doing the work in most cases at a lower cost than it could be done by the dealer himself.

Horton's New President



Henry J. Bowerfud was elected president of the Horton Manufacturing Company, washing machine manufacturer, of Fort Wayne, Indiana, at a recent meeting of the board of directors. Arthur H. Peters was named vice-president, treasurer and general manager and W. T. White was re-appointed general sales manager.

Mr. Bowerfud succeeds the late Henry C. Paul. He has been active in the Horton business for a number of years, and has served as vice-president since 1932.

Radio Audience Measured by Lamp Socket Poll

Spectacular results were obtained at the second radio voting experiment conducted by WOR on Sunday night, April 22, when an audience in Essex County, New Jersey, estimated at 200,000, participated in the first

radio referendum in the history of the art. Asked if they listened to programs of distant stations, the answer was four to one in the affirmative.

The observations were made at the West Orange Power Station of the New Jersey Public Service Corporation on a recording kilovolt-ampere totalizing instrument. The system operated on the effect at the power stations of turning on extra electric lights in the homes for affirmative or negative votes.

CHICAGO RADIO SHOW POSTPONED

Decision to defer promotion of a public radio show in Chicago until 1935 because of continuance of the Century of Progress Exposition this year, was made by the RMA Board of Directors at their meeting April 18. While plans had been made to conduct a public show in Chicago next fall, it has developed that industrial shows in Chicago are not successful while the Century of Progress Exposition is being held. The Exposition will not close until November 1 and the RMA Board felt that a public show during November would be too late.

Trade Name for "High Fidelity"

The Radio Manufacturers Association will develop, trade mark and protect for the industry a new name for the so-called "high fidelity" receiver which is being gradually developed in the laboratories. Commercial presentation of the "high fidelity" receiver is not possible for many months, possibly not before next year, according to opinion developed at the RMA Board meeting at Chicago on April 18. Because of the application now of the term "high fidelity" to many current receiving sets, although the receiver actually is only in laboratory development, the RMA directors decided to develop a new and definite name for the receiver and have it trade marked for industry purposes. Inability to trade mark the name "high fidelity" prompted this action.

WLW, 500,000 WATTS, DEDICATED MAY 2

President Roosevelt Throws Switch That Unleashes World's Most Powerful Station—Full Time Schedule

Formal dedicatory exercises of the new WLW, claimed to be the world's most powerful broadcasting station, were inaugurated Wednesday, May 2, concluding at 3 o'clock the following morning. At 9 o'clock, President Roosevelt, in Washington, closed an electric switch that unleashed WLW's half a million watts of electrical energy and carried the voice of Powel Crosley, Jr., to the four corners of the U. S.

The formal exercises were held in the Hall of Mirrors, Hotel Netherlands Plaza, Cincinnati, and at 11:30 p.m. transferred to the WLW studio. A banquet for honored guests was one of the features of the event. Among those present were the governors of several mid-west states, members of the Federal Radio Commission and U. S. Senators.

Regular day time and evening schedule using a signal strength ten times more powerful than any other station in the U. S. was made possible by the recently granted approval of the Federal Radio Commission.

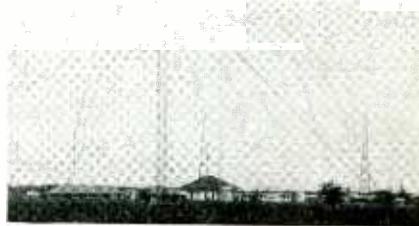
Tests conducted on the transmissions of W8XO, the experimental call letters used by WLW during early morning test hours, indicated to the Commission that despite the high power used no inter-channel interference was created. Field strength measurements were averaged and indicated a gain of approximately 325 per cent in most remote areas while the station's "sock" in the primary service area went up nearly 1,000 per cent.

KYW Leaves Chi For Philly

On October 27, by authority of the Federal Radio Commission, station KYW, one of the country's most popular broadcasters, leaves the city of Chicago, hops to Philadelphia. The change relieves the middle-western area of "air crowding," boosts service in the less congested eastern zone.

E. H. Gager, formerly of WENR, is resident engineer in charge of the installation for its builder, Westinghouse.

กรมไปรษณีย์ โทรเลข



Which is to say, Station HSP, Bangkok, Siam. Have you heard it? A rare avis but it has been dialed. Thanks, Lieut. Col. Phra Aram Ronajitt, for the photo.

TUBE MAKERS CLARIFY SALES POLICIES

Quality Outlets—Not Quantity—Keystone of RCA Tube Agency Plan, Says King—25,000 Applications Received

RCA RADIOTRON Company has received over 25,000 dealer applications for appointment as Retail Agents under its tube agency plan, according to C. R. King, general sales manager. Of these, 8,500 have been approved. The others are being passed on as rapidly as the district and home offices are able to examine them. While RCA's deliberate lack of haste has caused a certain amount of impatience, and the large number of applicants rejected naturally have been disappointed, the principle behind the plan of selection has been highly commended.

Mr. King further comments, in a special statement to *Radio Retailing*: "In our announcements to the trade we stated that the keystone of the Agency Plan is *better distribution*—not more distribution. We are not seeking a greater number of outlets. We want only those retail outlets which enjoy a comparable position of leadership in their respective communities. We must, therefore, proceed carefully in approving contracts."

Competitors Mark Time—Satisfied with Present Resale Policies

Radio Retailing also interviewed, May 3, competing tube manufacturers with respect to any changes in selling policies contemplated, in view of the present tube situation. For the immediate future, at least, no announcements of drastic alterations in jobber or dealer relations are in mind. It is felt that Radio Corp.'s consignment plan is a move in the direction of stabilization of prices—and, as such, it is welcomed. But there is no stampede to follow suit. Consignment, in toto, if it comes, will first be tried with the jobbers.

The following statement, by H. A. Hutchins, general sales manager of the National Union Radio Corporation, New York, reflects the general feeling. He says:

"The sole objective of my company is to sell its radio tubes in a way which seems to be most sound and profitable to all who handle the merchandise—manufacturer, distributor, service man and dealer. At present, this means an adequate stock consigned to distributing points only; a maintained and advanced list price; a quality product and the

necessary sales aids. These policies have been followed for years—and will continue to be pursued until such time as conditions indicate that any major change would present a possibility of more profit to the above four groups.

This "status quo" viewpoint also was expressed by E. Riedell, sales manager for Raytheon Products Corporation, New York. "Raytheon will stick to outright sale," Riedell declares. "We will not go consignment according to present plans, although we believe RCA's move a constructive one as far as price control is concerned."



First!

Fred Gooding, Wilmington, Del., was the first jobber in the United States to sign the RCA tube agency plan. He is being congratulated by C. R. King, RCA Radiotron general sales manager. W. H. Thompson, eastern sales manager, is at the left, and F. B. Wanselow, Philadelphia district manager, is at the right of Mr. Gooding.

Sylvania Auto-Radio Service Booklet Ready

An 80-page booklet full of helpful installation and repair hints on auto-radio is hot off the presses and on its way to Hygrade-Sylvania's Emporium, Penna., office. It is to be distributed free to servicemen who write Emporium.

Lee Schott S.M. for Halson

F. Lee Schott, formerly sales manager of Pilot Radio, is now national sales manager of Halson Radio, New York.

Halson has moved to 120 E. 16th Street, inaugurating its new home with an old fashioned house warming party.

10% for Store Labor

"Sales below cost," prohibited in the retail code, now must include in the cost item 10 per cent for store labor. This ruling was made by the government in the form

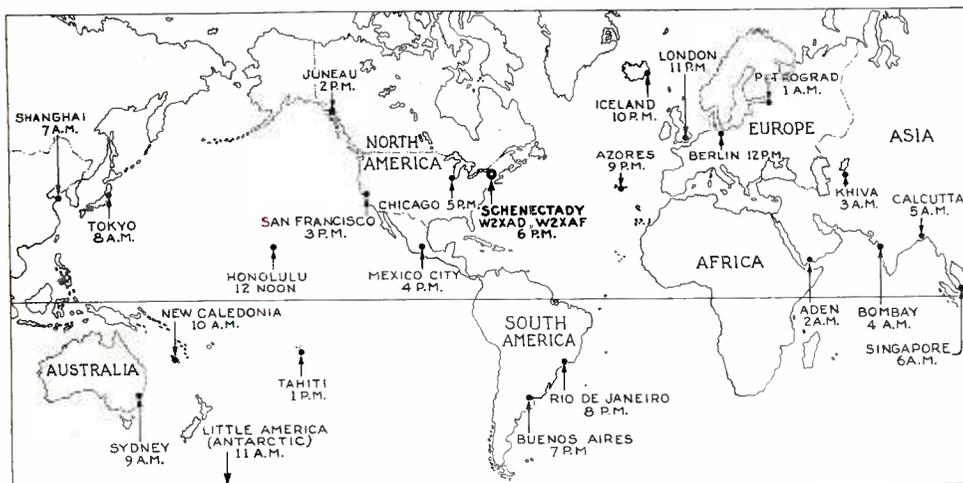
of an "interpretation" dated April 7. Cost for the retailer was defined in the edict as "actual net delivered" cost less all discounts or current replacement costs, whichever is lower."

PRICE REPORT

(Continued from page 15)

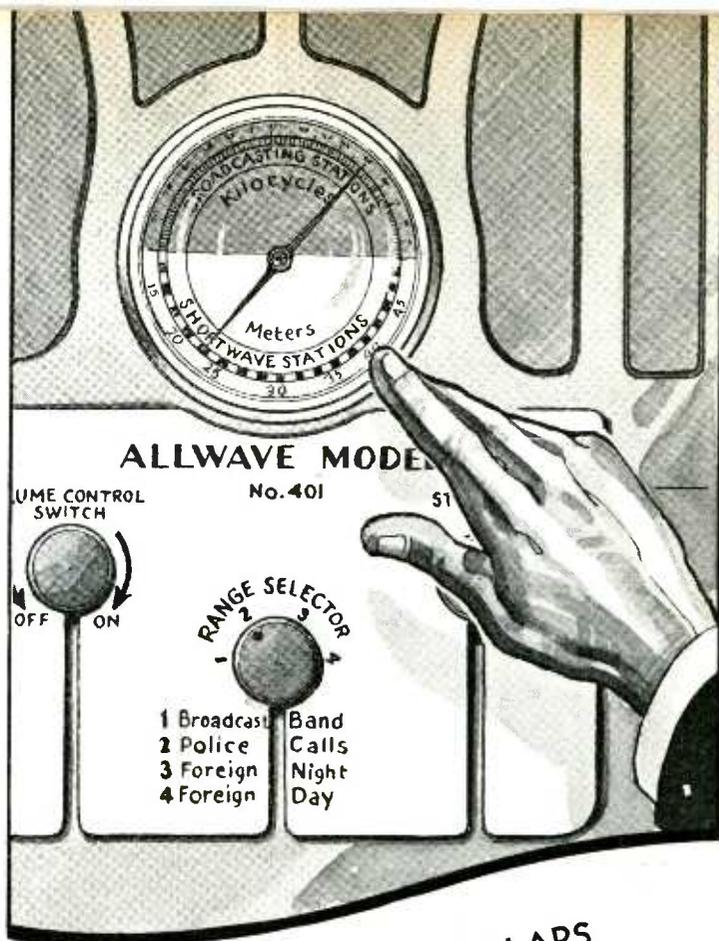
provisions of the biggest 20 codes, which cover some 75 per cent of American industry. They suggest appropriations for the job, and a really fundamental study, for they found that the statistics were few and not entirely up to date and that there was needed much coordinating. They held it impossible to recommend a price policy without these basic facts.

The determination of a government price policy is a thought of the President himself, and may have immense importance for the future developments in NRA and AAA, at the Federal Trade Commission and at the Department of Justice.



Six P. M. Schenectady Time is "Three O'Clock in the Morning" in Khiva

This time map shows how 24 hours of broadcasting was crowded into a single hour in GE's program on short wave stations W2XAD and W2XAF, recently. Ten languages were spoken in this first attempt to reach the four corners of the globe from a single sending point



1 THE BROADCAST SET THE PROSPECT ASKS FOR

2 "JUST A FEW DOLLARS EXTRA FOR SHORT WAVES"

Four Steps

(P. S. Don't Forget

WHOD of thought, just a few short months ago, that John Q. Public would one day again go mildly "nuts" over dx?

Back in 1924 he forfeited precious hours of slumber to twiddle the dials of a home-rolled receiver and catch the elusive call-letters of a station 2,000 miles away in Squeedunk. Then the novelty wore off . . . never to return, we erroneously imagined . . . and John settled down to a strict diet of quality programs from the locals.

Now he's back again, this time with a fervor which will probably make dx-listening the most important single sales factor in the business for the next few months. For, with the aid of a modern, extended-band tuner, the listener can substitute for Squeedunk much more thrilling stations in the remote corners of the world, with extra services such as police, aviation, amateur and trans-oceanic telephone thrown in.

And he can do it without sitting up all night. Best reception is, in fact, generally available around noon, in the early evening and just before the 8:15 pulls out for the office in the morning.

We induced our father-in-law, much against his will, to listen in on our amateur-band receiver the other night, switched coils to the 49 meter foreign broadcast channel. DJC in Germany, EAQ in Madrid and a

couple of South Americans promptly poured in like the proverbial ton of brick . . . and we couldn't pry him away from the set until midnight.

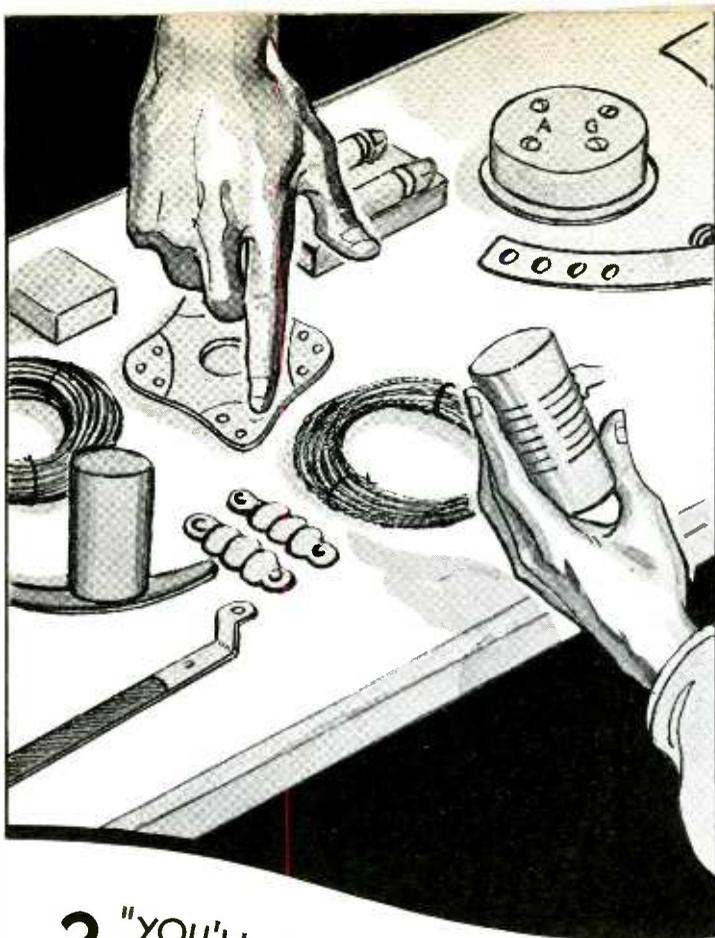
He's buying an allwave model!

This is a typical case of intrigued public interest. Take it from us, nearly everyone is interested in listening to foreign radio programs for the novelty if nothing else. Give them a taste of it and many become swell prospects for sets of their very own. The hobby is gathering headway like a snowball . . . every new "fan" makes 10 more.

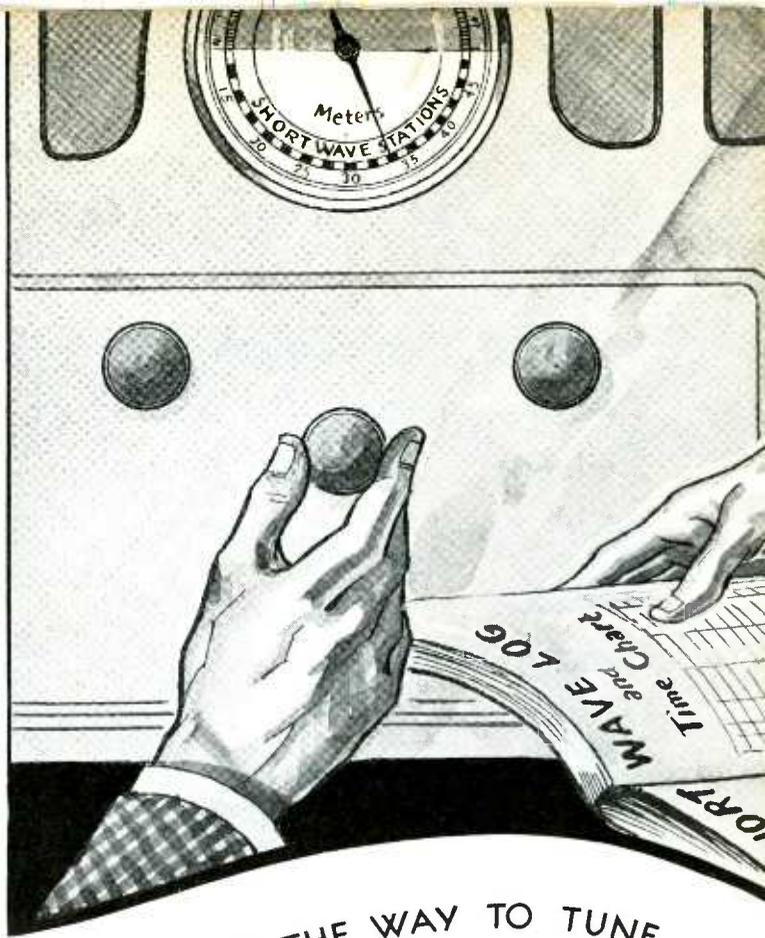
But the novelty will, in our estimation, eventually wear off. Keen consumer interest . . . a tremendously valuable sales factor . . . will dwindle. What is a "natural" today will be simply another wonder of science, taken as a matter of course, tomorrow. The public may, in the end, simply demand allwave performance from all sets.

We therefore urge the trade to take advantage of this flurry NOW. Here are our recommendations:

1. Show an extended-band receiver to every customer who asks to see an ordinary broadcast type.



3 "YOU'LL NEED A NOISELESS ANTENNA SYSTEM"



4 "HERE'S THE WAY TO TUNE IN FOREIGN STATIONS"

to *Extra* Profits

the Special Antenna)

2. Tune in your best dx station right in the store in order to clinch the sale.

3. Talk about special, "noiseless" antennas in the same breath with shortwave reception, and

4. Teach every buyer of an extended-band receiver how to tune, once the set is sold, right in his home.

EXTENDED-BAND receivers still bring a few dollars extra and, with it, that much sought-after extra margin. And special antenna systems are profitable items in their own right, sometimes returning a greater profit than the sale of a cheap cigar-box receiver.

We don't want to be "preachy" but here are a few tips on extended-band model selling gleaned from dealer interviews:

Don't promise the consumer the earth. He will be satisfied with less. Sell shortwave reception as an extra, added attraction. Regular broadcasting is the big thing, unless a straight shortwave set is purchased. Remember that oversold shortwave receivers "bounce" like a rubber ball.

Avoid skimping installations like the plague. We

realize that it is often necessary to "pressure" installation men in order to make ends meet but the shortwave sale is no place to do it. These sets need good installations.

Install a noiseless antenna system in the store. In all but the very worst locations these make possible the reception of at least the half-dozen most powerful shortwave receivers. Without such systems the storekeeper's name is generally "mud." And a store demonstration is mighty convincing.

Equip each purchaser of an extended-band receiver with a full complement of shortwave station logs and international time conversion tables. This will keep him interested while he is learning to tune and is excellent sales promotion material as it frequently gets into the hands of the purchaser's friends.

Form a shortwave club in your town. It's being done elsewhere (See news pages of this issue).

Don't be stingy with window space. Verification cards, world maps, flags of all nations and the attractively dialed sets themselves are sufficiently "different" to stop traffic.

All this may sound pretty enthusiastic . . . but enthusiasm is what it takes to sell shortwaves. Take our tip and STRIKE WHILE THE IRON IS HOT.

It Takes IDEAS To



GLOBE DIALER'S WINDOW

Strange weapons and curious from many parts of the globe have been used in the window display pictured above to dramatize the idea that short wave radio now opens up a new world of entertainment to fireside explorers. It was arranged by Weiss and Sambalino, new Atwater Kent dealers in Buffalo, N. Y., who claim that it has drawn large crowds and brought many sales.

ASKS ONE QUESTION—AND CLOSSES SALE ON FIRST CALL

CHARLES J. MILLS, Los Angeles radio sales manager, has sold over \$700,000 worth of radios in the last five years. Mills credits many of these sales to a simple but unique method of closing. The plan was developed several years ago and is proving its worth today when trade-ins again are playing a prominent part in sales.

The idea is designed to close the sale on the first call. First, help the customer decide on the exact model he or she wants, says Mr. Mills. Be sure that you have settled on the exact model. This is important. Your customer will of course have learned what the price is. If he doesn't ask about terms, find out with the question, "Will you want to pay cash or buy on the easy payment plan?" This creates an opportunity to tell him how much the down payment will be and a chance to convince yourself that he can afford to make the purchase. You are building step by step for the final clincher.

If he hasn't mentioned it previously, ask him if he has a radio at home to trade in. Nine out of ten people have, usually one of the early a.c. sets. From his brief description without going into too many details you can

ascertain what he has. *Don't* ask to see it and *don't* ask him to bring it in. Figure in your own mind approximately what you can sell it for, if anything. Then you can mentally set your trade-in allowance, depending of course on the value of the new set. You may occasionally make a mistake in setting a price on something that you have never seen, but you will lose far more sales and profits by asking to see the used radio.

Now comes the crucial point. Lead back in the sales conversation to the new radio, the exact model he apparently wants. Stress its good points. Work up as much enthusiasm as you can. Then put this question to him pointedly. The exact wording is important. Mills instructs the salesman under him to learn it by heart, so that they can deliver it straight from the shoulder.

"If I make you an allowance on your old radio that is more than fair, in your estimation, can we close the deal right now?"

Mills estimates that in eight cases out of ten the answer is "Yes" and a big majority of the "Yes" cases are closed. Where the salesman omits the question the



Mills induces the customer to settle on the exact model wanted, eliminates all the possible buying excuses, then puts the special question that cinches the sale

majority of the sales are not closed, at least not for that day—and, frequently, never at all.

Setting the allowance for the trade-in is of course up to each individual dealer. Most buyers, realizing the many advantages of the new sets over the old, will usually accept the average trade-in allowance as "more than fair" if put to them in this way.

ATTENTION! JOBBERS—Instead of running a long list of your dealers' addresses in your newspaper ads, try Pete Sampson's idea—Sampson Electric Company, Chicago. Pete omits the dreary directory and runs instead, in big type, the following notation: "For address of your local dealer, phone CALUMET 2255."

Build A BUSINESS



RADIO OWNERS!!!
Is Lexington the Noisiest City For Radio Reception?
 Every residential district is to be checked with special equipment for power leaks, sign flashers, etc., by JACKSON'S RADIO SERVICE
 As an extra service at no cost to you, after the test you will be the owner of this noise noise curve. Please answer the following questions and mail at once to your district office. All by check immediately.
 KIND OF NOISE CONTINUOUS or INTERMITTENT
 TIME OF MOST INTERFERENCE When raining; very loud; when the wind blows; etc.
 112 Madison Avenue, New York 17, N.Y.
 MAIL TO JACKSON'S RADIO SERVICE
 112 Madison Avenue, New York 17, N.Y.
 DAY AND NIGHT SERVICE
 Member, N.R.A., N.R.S., N.R.E., N.R.C., N.R.P., N.R.A.S., N.R.A.S.A., N.R.A.S.A.S.

THIS MAP SAYS THAT JACKSON MEANS BUSINESS

This trouble area map, prominently posted in the establishment of the Jackson Radio Service, Lexington, Kentucky, supplies convincing proof that J. B. Jackson means what he says when he offers to "shoot interference" for customers.

"When leaks are found I notify the power company—and also check all the sets in the neighborhood, including the antenna installations," he states. Thus does Mr. Jackson get new business as well as rendering a community service.

Dealer initiative in locating noise causes or in organizing a group of local servicemen to cooperate in this endeavor, will many times stir up the power company so that it also will assign a man to pitch in and help.



J. B. Jackson and the truck he uses when shooting interference. Note the miniature masts. This roof aerial attracts attention as well as supplying strong signals for an auto receiver

TALKING POINTS FOR SHORTWAVE

Why buy half a set?

We are prepared to demonstrate shortwave right here in our store—using a special SW antenna.

We always test reception conditions right where the set is to be used—and will tell you frankly just what alterations, if any, should be made to your present antenna.

We give tuning instructions in DX hunting.

We supply a shortwave log and time chart.

A lot more radio at a slight increase in price.

HINTS TO DEALERS

Don't talk price until after the home demonstration.

Obtain permission to demonstrate in the home one of your best SW receivers.

Go after the "foreign" population first—employ a man of foreign extraction to contact this trade and sell it shortwave.

Don't overlook the new SW "ham" business.

If the installation needs a special antenna, insist on it.

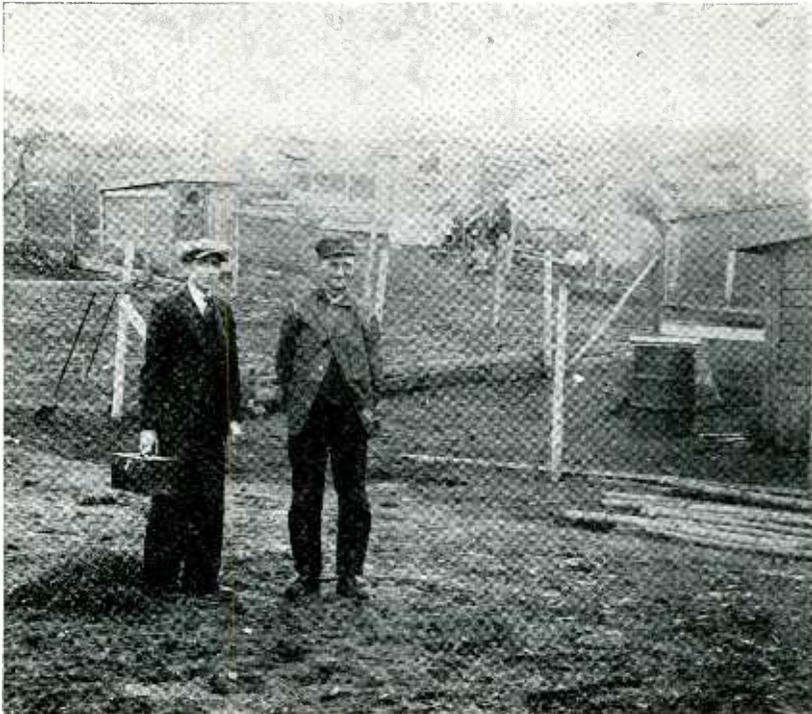


EFFECTIVE STORE LAYOUT

Here's what the new store of the Le Moine Music Company, Denver, looks like. It's modern and has original features. Note the special platform, five feet wide, built nine feet above the floor for extra display room and attention value at the rear of this clean-cut layout. Here are mounted "leaders" or top quality models. French doors connect this platform with the second floor offices immediately behind it.

Le Moine Bechtold believes in a balanced exhibition of small and large sets, both equally accessible. Most of the newer radio stores are using sidewall platforms. Protects the consoles and brings them up to eye level.

SMALL TOWN TERRITORY NO HANDICAP, SAYS SERVICEMAN



"I keep posted on the local market for farm products and tip off the farmers and the merchants if either has something the other wants"

Editor's Note: We are indebted to F. C. Rockhill, St. Regis Falls, N. Y., for the following practical ideas. We are running this article just as submitted by Mr. Rockhill, in his own straight forward style.

OUR start in radio was as a service shop. When the boom came we entered the set field. During the time of high wages it was easy to do a large volume of business even in a small town. But the crash came and unit sales dropped to \$50, then \$25 and at last to \$18. We held ours there but it was impossible to keep our dollar volume up. So we went back to active service work.

First we took stock of our town. As the population is not over 1,500 this was easy. We found that there were very few people without a radio and that there was real money in pushing service. We also decided to cover as much outside territory as possible and to sell sets as the opportunity offered.

ADVERTISING

It was now necessary to choose the kind of advertising that would do our job the best. There is a weekly newspaper published here and a daily comes

in from the county seat. We decided to give each a try and ran two column, three inch service ads for a month, mentioning also that we were authorized dealer for two popular makes of sets. While the newspapers didn't pull much business we think they helped build us a reputation outside our own town.

Direct mail was next tried and here we scored. Knowing all the people in our town and a great many in adjoining towns was an aid to us here. Many people contend that most advertising letters end in the waste basket but if you personally know the man there are ten chances to one he will read your message. If your sales points are good your first letter will plant the idea that you have something to sell that he needs. We generally use three letters, spaced a week apart. Some of these are to sell tubes, others just service. Two are reproduced here.

Our service work was now increasing and some of our trips averaged 24 miles one way.

That brings us to transportation charges. This cannot be set for every locality but after much figuring and a lot of talking with our local garage man, we charge ten cents a mile one way for the use of our car plus one dollar an

F. C. Rockhill's Own Story of Sales and Service Success in a Community of 1,500

hour for time spent working and traveling one way.

List prices are charged for all parts and tubes. The old bugaboo, cheap tubes also appears here. There are no cut price stores but every one gets a catalog from the two large mail order houses that we are all familiar with. Even yours truly receives these and turns at once to the radio section to get posted on their offerings. By being able to quote their prices, offhand, we are able to tell more convincingly why our tubes are worth more. Many times, if they have a mail order tube that has been in use for a while, a reading of the plate currents of this tube against that of a standard brand will show the difference between the two brands. We find that this is a good way to fight this competition and if your customer knows that you are sincere, just your word will go a long way.

We still try to sell as many new sets as possible and use direct mail advertising to help these sales along. By keeping our ears and eyes open we know when a man is in the market for a new set. A letter is at once mailed to him, calling his attention to the features of our sets. He is called upon within the next day or two. If he cannot be sold at once we keep checking him up as opportunity offers.

FREQUENT FOLLOW-UPS

Any one having a set that is three years old or more is canvassed once each six months in an effort to sell a new set. We keep a card index, with the information necessary to carry on this kind of selling listed on each card.

After we find that it is impossible to sell a new set a letter is mailed, offering to remodel the old set. This business is worthwhile but should not be used unless it is impossible to sell a new set. Make certain to figure enough margin to insure a profit. It is better to leave it alone than to work at a loss.

A theater is also located here, this runs only three nights each week, and we service their talking equipment. This work is not hard and not nearly as

complicated as the newer sets. Slides are used advertising our service at each show. These are furnished free by many tube makers and the manager of this theater does not charge us for running them. As another aid to secure sales from the farmers, we keep posted on the local market for farm produce, and tip both the farmers and merchants off, if there is a possibility that one of them has something the other wants. After a few services like this if either is in the market for radio equipment we are the first ones thought of.

During the past two years the farmer has been hard to sell, due to the low prices that he was receiving for his produce, but with prices going up we believe that the farmer will be buying this year. We are now planning a drive to sell Air Cell sets.

We do all the work that we can at the shop but if the distance is too great the work is done in the customer's

An Offer to Modernize One's Set

Dear Sir:

Would you pay \$20 for a new set? A new SUPER-HETERODYNE with all the latest trimmings—automatic volume control, tone control, selectivity that allows you to cut through interfering stations and bring in the one you wish to hear clearly. Power enough to pull in far distant stations with ease.

With the advent of pentode and duplex triode tubes, radio sets have been greatly improved. All the new sets have these tubes and we are prepared to rebuild your set so it will use them.

We are proud that we can bring these improvements to you at such a low cost. We can safely guarantee that your set's power and selectivity will be doubled and the tone greatly improved.

Very truly yours,

F. C. ROCKHILL

Selling the Idea of Replacing Those Old Tubes

Dear Sir:

Is there a weak tube in your radio set spoiling the many fine programs that are now on the air? You know that to get the most enjoyment from your set it should be checked over at least once each six months and all worn out tubes removed.

At the present time history is being made in all parts of the world, old orders change and make way for new. Every day and night all these latest developments are put on to the air. But to keep posted you must listen. Don't let weak tubes spoil your enjoyment of today's splendid programs.

Tubes prices are down, quality is up. Now is the time to have them checked.

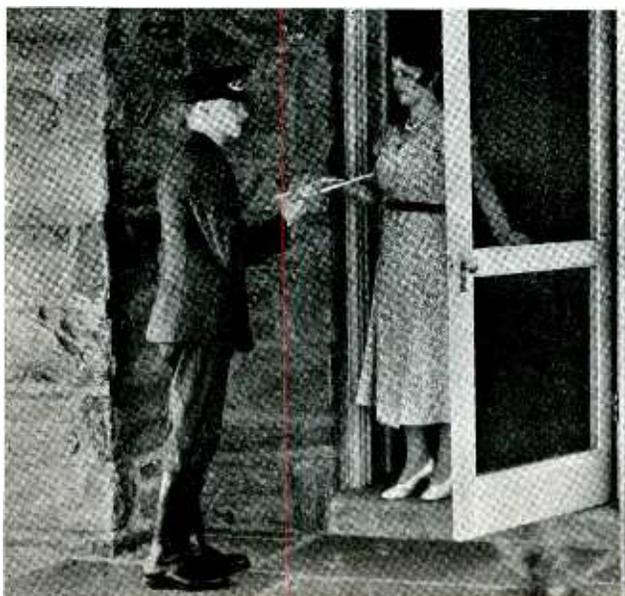
Yours for better radio,

F. C. ROCKHILL

home. On long trips we take along all the parts for that particular set. Nearly all of our equipment has been built in our own shop, for our particular needs.

We believe that there is as much money in servicing as there is in selling sets and that now is the time to go get it.

Editor's Note: Accompanying Mr. Rockhill's article were three excellent examples of follow-up letters which he uses with telling effect. Original sales letters, simply and sincerely written, exert the most pulling power, he claims. The two here reproduced hold attention because they make definite assertions. Note particularly the opening paragraph of the letter at the top of this page. Also the arguments (left) for replacing one's tubes.



MESSENGER BOY SALESMAN

The Marietta Radio, Auto and Supply Company, Marietta, Ohio, utilized a unique method of tying up with national advertising. Selecting a list of good prospects, this concern bought several copies of the Saturday Evening Post containing the current Stromberg-Carlson advertisement. The firm's card was pasted on the front cover of each copy and a notation made of the page where the Stromberg Carlson ad appeared. The copies of the Post were delivered to the prospect list by Western Union messenger service.

This plan resulted in the sale of six sets directly traceable to this unusual merchandising idea.

At first thought, this method of advertising may appear unusually costly. It should be borne in mind, however, that results are what count. It is hardly conceivable that the dealer's name and that of the radio he seels cannot fail to make a big impression with every prospect thus contacted, especially if the list is carefully compiled.

Convenience *characterizes* The 1934 REFRIGERATOR

By Arthur P. Hirose

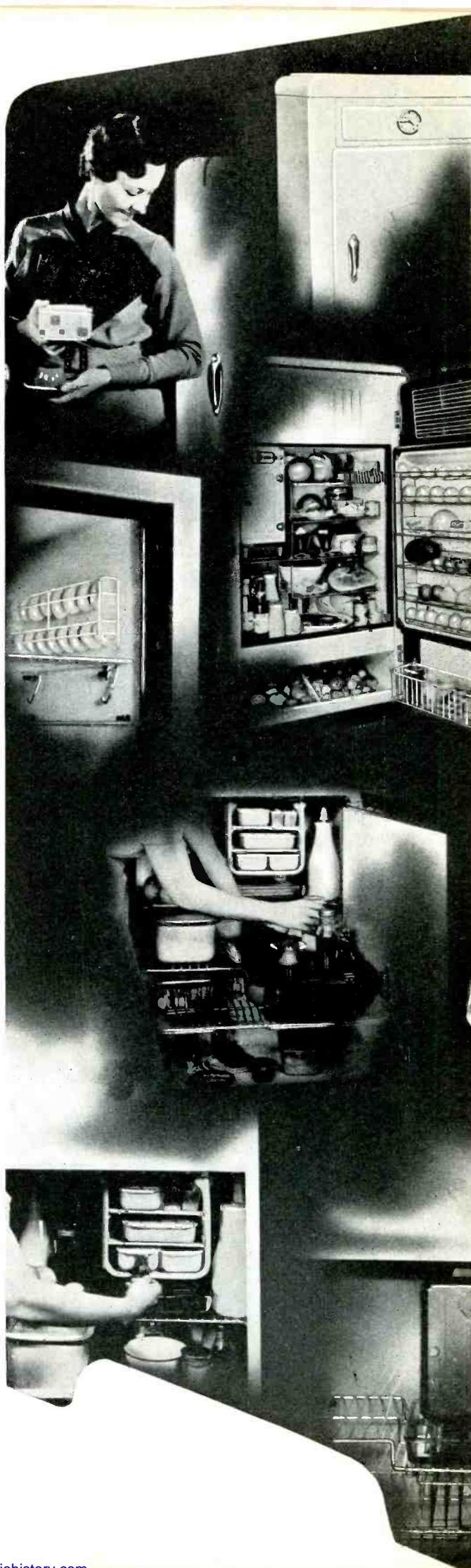
WHAT are the special features that electrical refrigerators will boast of this season? Last year (see *Radio Retailing*, April, 1933) the big talking point was "style"—new cabinet lines and exterior beauty. This year emphasis is decidedly on the inside of the box. This doesn't mean that the 1934 models are not beautiful. They are. More manufacturers have styled their cabinets than ever before. However, cabinet appearance no longer is front page news. Today, *convenience* is the fair-haired boy.

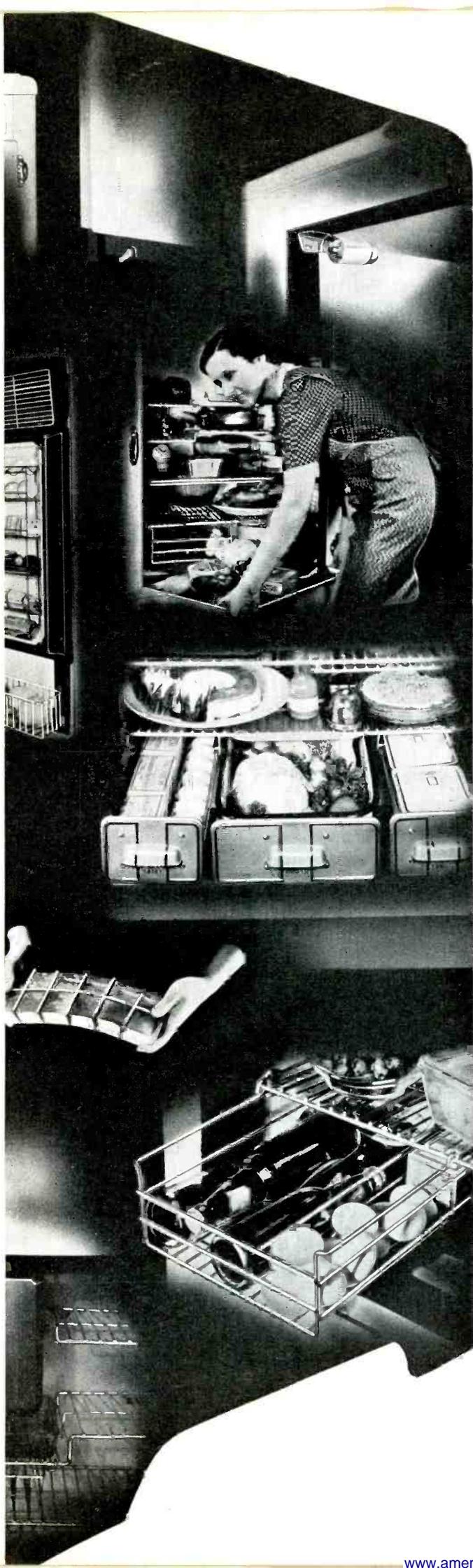
EASY OPENING This convenience really starts before the housewife looks inside her refrigerator. There's been an increase in the number of makes with pedal door-openers. The easy opening door latch is another talking point this year—latches which operate by a mere touch of the hand, the finger, the elbow or what-have-you. Examples: Norge, Stewart-Warner, Westinghouse.

SHELVES Once the door swings open, refrigeration's real 1934 show is on. Automatic electric lights that flood the interior with illumination are found in practically every line. What do these lights reveal? They show a commendable study by the manufacturers of the problems of food arrangement. Some cabinets, like Leonard's, have folding shelves that can be shifted as desired. Quite popular is the sliding or rolling shelf that says, "Why try to reach behind the sauerkraut to get at the spinach? Just pull me out."

Then there's an increase in the number of models with shelves of ribbon metal, so that small bottles and dishes won't tip over. Other factories are fashioning shelves in diamond grid patterns for the same reason. Egg and dairy basket shelves also are to the fore, answering the problem of what to do with small foods. Finally, 1934 sees a growing use of serving trays in refrigerators, shelves or trays for holding dishes while Mrs. Smith rearranges her food. Those radio fellows at Crosley almost have the corner on shelves fastened to the door—but not quite, since that ole debil Sears, Roebuck has put two shelves on its "Coldspot" doors.

COOLERS How about the gadgets that go on top of shelves? Well, for one thing, manufacturers expect lots of cooled water to be drunk this year and many of





them include, with their de luxe models, a water cooler or a water pitcher. Some brands, too, like General Electric, feature glass food containers. Vegetable crispers or hydrators are of course still furnished as standard equipment on many lines. One manufacturer even supplies, with some of his boxes, a refrigerated rolling pin. Fortunately, he makes it of glass so that the housewife can't use it more than once for any other purpose than subduing pastry dough.

ICE TRAYS As might be expected with the advent of repeal, ice cubes are even more in the limelight. Cubes are more plentiful in the new boxes. At least one ice cube tray with a flexible grid is included in most of 1934's refrigerators. Getting the tray out of the compartment isn't the same tussle it was because many of the new boxes have tray releases to save time and temper. Doors over the ice cube compartments to keep out food odors are also gracing more models than was the case last year.

BINS This year more of the refrigerator designers have been concerned with the problem of where to keep the less perishable fruits and vegetables. Hence a few of the new boxes have vegetable bins under the food compartments, bins that aren't refrigerated, of course.

BASES Apparently there isn't going to be so much dither this year about whether a refrigerator has broom-high legs or not. These low bases that Norge and Copeland pioneered last year are appearing on more manufacturers' boxes this year. In fact, come to think of it, perhaps they've influenced some of our low-base radio consoles. Speaking of radio reminds us that Crosley Radio have some 1934 refrigerators that scorn both legs and bases—they come right down to the very floor. You can't sweep under these refrigerators—you don't need to.

LOCKS Are people becoming more or less honest? We asked ourself this question as the new refrigerators for 1934 were introduced, because last year one manufacturer (Gibson) introduced a refrigerator with a lock on the door. To be sure, he explained that the lock was to prevent the kiddies from emptying the refrigerator, but we suspected the lock was designed to prevent the man of the house from making unauthorized midnight raids on the family larder. At any rate more manufacturers this year have refrigerators which can be locked. Human nature is apparently getting worse and worse.

UNITS But while human nature must still be guarded against, refrigeration machinery has improved. But the manufacturers talk less about their refrigeration units than they did. For one thing, it's become accepted that most refrigerators, like most motor cars, will operate. The old question of whether the machinery should be mounted on top or at the bottom of the cabinet no longer seems as important. Also we have a hunch that the hermetically-sealed advocates won't battle as bitterly with the non-hermetically-sealed champions as they once did. Barring Grunow, not much stress on refrigerants is expected. Refrigeration machinery does show notable advances, however. So does cabinet insulation. So, too, does refrigeration control—automatic defrosting and temperature control both appear on more 1934 models than was the case last year. Grouped controls to make things easier for the housewife are more evident and one manufacturer (Major) has even added to his instrument panel a dial registering the temperature inside

the box. Sparks-Withington, doubtless remembering the importance of instruments on radio, mounts a defrosting clock on their new Sparton refrigerators. A handy and accurate time piece as well.

CABINETS There's not much furore this season over cabinet materials. Porcelain exteriors are reserved for the folks with more money and lacquer-finished cabinets are for the buyers with less money. Of course, we expect the usual fight between the manufacturers who use all-steel cabinets and the chaps who use steel-and-wood. But that battle so closely resembles the scrap in the auto field between the all-steel and the metal-and-wood body advocates that it's no longer news.

It's our feeling, too, that hardware won't be so vitally important this year. To be sure, there are still the adherents of concealed hardware, semi-concealed hardware and nudist hardware, but evidently the trade and the public both say, "What the heck!"

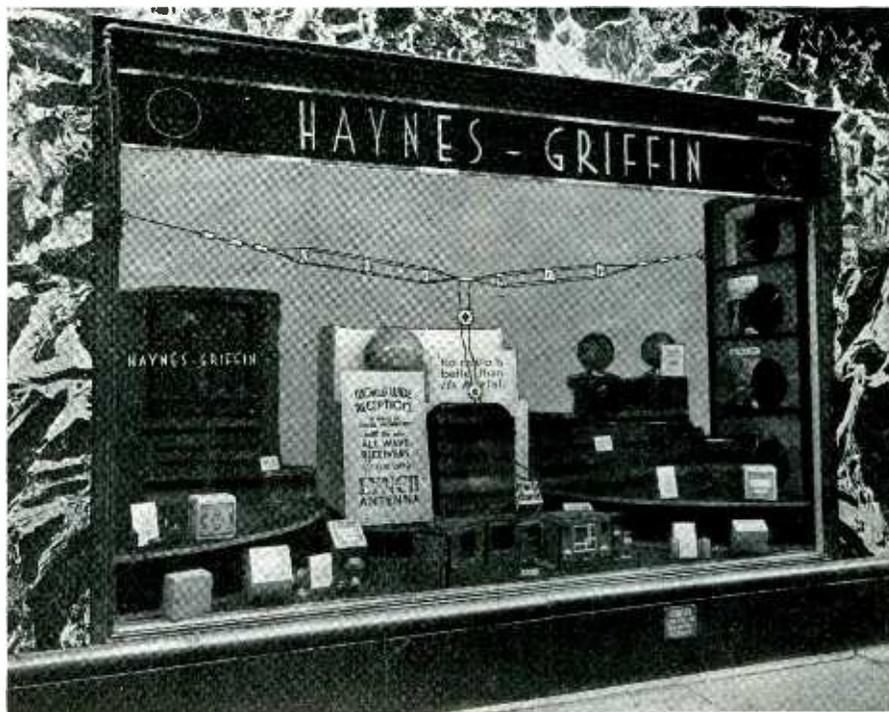
DE LUXE Perhaps signs of better times are the very ritzy de luxe models that a number of manufacturers are introducing. Not only do these extra special models produce enough ice cubes for a movie actress to take a bath in, but they also offer special arrangements for keeping almost all types of foods. Special, labeled compartments are provided for vegetables, for dairy foods, for frozen foods and for other varieties of eatables. Frigidaire and Kelvinator are particularly responsible for large scale pampering of the housewife and her kitchen help.

GUARANTEES The refrigeration guarantee race seems pretty well over. Three-and-four-year guarantees trouble the manufacturers' sleep no longer—the whole *guarantee* problem having simmered down to one year. However, there's still room for competitive selling on service. General Electric and Westinghouse are making much of their guarantee *extension* plans. G. E. offers five years of protection on its Monitor Top mechanism for \$1 a year. This means the buyer gets the one-year standard warranty free and receives four years' additional protection against failure of the mechanism for \$5. Westinghouse provides a four-year unit replacement contract in addition to the one-year warranty on its machines and this replacement contract also costs the purchaser \$5.

PRICE What about price? It would be our considered estimate that price itself will be far less a feature than it was last year or the year before. For one thing the public seems leery this year of the very cheap (and very shoddy) boxes.

It's difficult in an article or even in a tabulation to mention all of the features or all of the makes of refrigerators that are being offered to the public. Yet the dealer can see that while the brand of refrigerator he is selling may not have *all* the features, neither has any other brand. Obviously there are enough good talking points to go 'round. At least the radio dealer and his sales force can, with a little study, develop a familiarity with competitive features so that his prospects run little chance of flooring or stumping him.

FEATURING THE SPECIAL ANTENNA IN AN ALL-WAVE WINDOW



Ten years experience in radio lies behind this short-wave window trim by Haynes Griffin. Subscribers to the first issue of *Radio Retailing*, (January, 1925) will recall that this New York dealer, in those early days, received editorial mention for the excellence of its store layout.

Much of its subsequent success is due to the liberal use of striking displays.

"String up a special, shortwave antenna in your window. It's a trim in itself and a guaranteed attention-getter," declares Jack Griffin.

ACCIDENTALLY—ON PURPOSE

WITH annual regularity, since the early days of radio, the approach of spring witnesses the dumping of manufacturers' surplus stock at ridiculously low prices. Why does this destructive practice continue, year after year? Can it still be due to the manufacturer's inability to estimate his market? Are these sets actually "distress" merchandise? We think not. For if all the radios dumped on the market each year, at, near or below cost, were supplied only by manufacturers actually in distress there could hardly be a single solvent company in the radio business today.

Much of this give-away merchandise, which annually disrupts the industry, bears some of our best known trademarks.

What are the reasons advanced to justify this periodic dumping? Manufacturers say:

(1) "We budget production to the best of our ability but, because demand varies so widely from year to year, it is impossible to hit the bull's-eye."

(2) "Technical improvements occur so rapidly that circuits frequently become obsolete within a few months' time."

(3) "Most of the dumping is done by the fly-by-night operators."

When radio was young these reasons may have been based on the actual facts but is this the case today?

Set sales have varied comparatively little during the past three years. And technical improvements have been relatively minor in nature. (Until the quite recent popular acceptance of shortwave, a last year's model could be sold almost as readily as a new design and would render as much consumer satisfaction.) As to the third excuse, 15 minutes spent along any "Gyp Row" will convince the most skeptical that dumped merchandise is not, by a jugful, the exclusive product of the "lofts."

That this endless dumping of valuable receivers and quality parts is mainly due to an inability to measure the market no longer seems reasonable.

What, then, are the real causes?

After careful investigation and study we are compelled to conclude that dumping often occurs "accidentally—on purpose." That it has its roots in the desire of the set maker to buy parts in quantities large enough to secure an absolute rock bottom quotation, even though the set maker cannot possibly hope to utilize all these parts in his current production requirements.

A Hypothetical Example

Consider this hypothetical example, by way of explanation:

A certain set maker obtained a quotation on a sufficient number of parts for this year's needs, basing

requirements on 1933 experience. The parts maker quoted 19.1 cents per piece—but also quoted 16.1 cents if the order could be doubled.

Now the set maker could not possibly hope to use double the original quantity. But the three cents differential looked mighty attractive—even necessary if he would meet the rumored price schedules of his competitors. Pushing the pencil a bit he discovered that he could break even on the double purchase simply by reselling the surplus *at cost*.

The order, at 16.1 cents, was placed . . . with mutual knowledge from the start that this overstock must be disposed of in some special manner and that something ultimately must be sacrificed.

What courses are open to the set manufacturer who overbuys? He can:

(A) Incorporate the surplus stock of parts in sets deliberately produced to be dumped at or near cost; figuring that the profit obtained on the prior sale of merchandise during the season will more than cover sales expense on his "distress" stock.

(B) Sell his unused parts stock on the "day of reckoning" to a distress parts outlet.

(C) Or he can call in a distress parts buyer immediately and dispose of his overbuy at once.

Multiply this example by the number of set makers in the country whose products are dumped and the basic reason for the industry's apparent inability to protect its dealers becomes crystal-clear.

Who's to Blame?

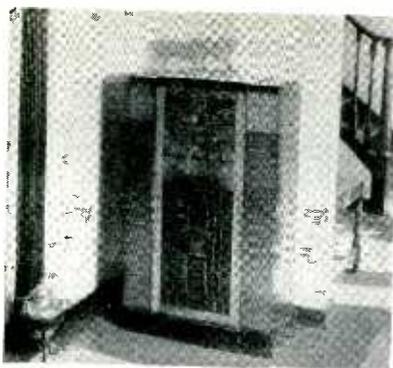
Are the parts manufacturer's ethics subject to criticism because he offers a differential discount on quantity? Probably not.

Are the set maker's ethics subject to criticism because he buys an overstock of parts, knowing that he can dispose of it in his own sets or by resale? Probably not.

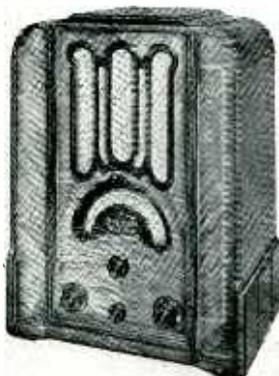
The situation resolves itself into a matter of good business judgment rather than of ethics. Whenever a set maker deliberately overbuys parts to gain a price advantage and then dumps his overstock of sets or parts he is penny-wise and pound-foolish. He is encouraging severe competition with his own retail outlets—for most of these dumped parts turn up in other makes of sets, which, because of their extremely low parts cost, seriously retard the sale of legitimately priced merchandise.

Likewise, the parts manufacturer, who sells the set maker more parts than he can use, discovers these same parts, eventually, in the hands of other set makers who are, therefore, no longer prospects for components priced on a moderate quantity basis.

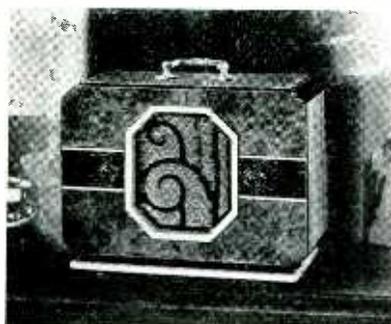
SETMAKERS BOARD SW BANDWAGON



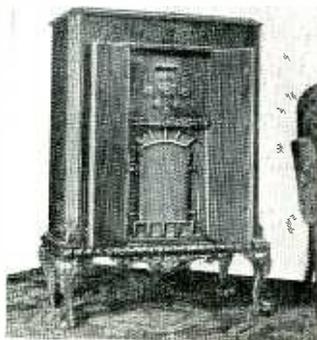
Franklin's \$175 moderne console tunes from 15 to 550 meters



Pilot's "Dragon" pulls 'em in from 14 to 555. Special model reaches 2,000 meters



Emerson's Model 330-AW operates from 75 to 550, bringing in police, amateurs and planes



Sparton's 13 tube "Triolian" tunes from 12.5 to 530 meters with no breaks

Franklin, Pilot, Sparton And A-K Out With New Allwavers—Emerson, G-E Announce Dual-Range Sets—RCA Breaks With Special Antenna—Silver Marshall Develops Straight Shortwaver

THE new allwave sets are "bowling them into the aisles," particularly along the eastern seaboard, where European broadcasts come in like locals. Manufacturers, quick to sense public demand, are climbing aboard the bandwagon, building and rushing to market new extended-band receivers.

Franklin Radio of Dayton lists three entries which should be popular. The first is a deluxe 15 to 550 meter job at \$250, which includes an automatic, record-changing phonograph. Then there is a \$175 console incorporating the same radio chassis but without phono mechanism (pictured). And, finally, the Model 55CU a.c.-d.c. table model tuning from 19 to 55 and from 180 to 550 meters, at \$37.95. The latter uses a 6A7, 6B7, 78, 43 and 25Z5.

Pilot of Long Island City, in addition to a 14 to 555 meter "Dragon" midget (see photograph) equipped with a.v.c., q.a.v.c., tone-control, phonograph and headphone jack, has a new model 90 which tunes from 18 to 52 and from 200 to 550 meters. The Dragon, in a.c. style, uses a 5Z3, two 57's, two 58's, 56, 2A5 and 2A6. The 90, a "universal" type, has a 6A7, 6D6, 75, 43 and 25Z5. Both are available with longwave ranges (900 to 2,000 meters) for export. Models for various kinds of current available on order.

Sparton's famous "Triolian" 13-tuber with triple speakers has had a set of monkey-glands installed in the form of a multi-range dial plus all that goes with it. The new model tunes from 12.5 meters to 530 with no breaks. A five-section drum in as many colors produces an extremely flashy panel and should catch the shortwaver's eye.

Atwater-Kent goes "whole-hog" for shortwaves with Model 711 (illustrated) which combs the ether from 540 to 23,000 kc. Has a.v.c., auditorium size speaker and other modern features. Then there is a \$39.90 (F.O.B. Philadelphia) midget that covers the broadcast and one police band, from 540 to 1,700 kc. and important dx between 5,500

and 15,500. The latter model has a 2A7, 58, 2A6, 2A5 and an 80 and is inclosed in one of the popular "high" modernistic midgets.

Emerson of New York has strengthened its line with two new extended-band models. The 330-AW semi-portable (see picture) at \$35 tunes from 75 to 550 meters and is a 5-tube "universal" superhet. Uses two 78's, a 77, 43 and 25Z5. Available with a 200 to 2,000 meter range on order. The 31-AW, using the same tube lineup, has a "Syrocowood" case and sells for \$29.95.

General Electric already well up among the shortwave leaders, adds two more models. The M-68 (illustrated) covers the broadcast band and also tunes from 5,400 to 15,350 kc. Has tone control, automatic v.c. and vernier dial. Also includes a phonograph, an indication that the company finds a market for shortwave reception even among the "high-hats." Model 65 is similar in all respects to the 68 but does not include a phonograph.

Equally interesting is a straight shortwave receiver with full band-spreading designed by the Hallicrafter Labs. of the Silver-Marshall Mfg. Co. as a "companion" set to a good broadcast receiver. Known as the "Skyrider," this receiver is one of the first of the exclusive low-wavers predicted some months ago by *Radio Retailing* for people who want to listen to high-frequency programs and already have a satisfactory broadcast set.

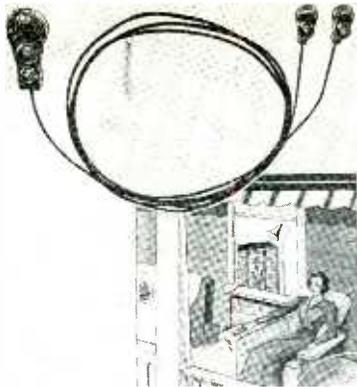
Even the "noiseless" antenna, so necessary in many locations for proper shortwave reception, comes in for its share of the manufacturers' attention. Add RCA-Victor to your list of makers. The Corporation has a "Di-Pole" system at \$7 list which includes an antenna transformer and switch, antenna crossover insulator, two 46½ ft. rolls of antenna wire, 110 ft. of transmission wire, 4 strain insulators, a lead-in insulator, 2 transmission line insulators, ground clamp, transmission line clamp, 3 woodscrews, 2 insulating sleeves and 2 spacers.



Atwater-Kent's Model 711 (those magic numbers!) covers 540 to 23,000 kc.



GE's M-68 is a phonoradio combo, gets broadcast and 5,400 to 15,350 kc.



Fada Remote Control

Particularly handy right now when folks are starting to sit on the piazza warm nights is the remote control of the Fada Radio and Electric Co., Long Island City, N. Y. No electrical or complicated mechanical connections are involved. To attach, the dial and volume control knobs are removed and the knobs of the remote control put in their place. Not only can stations be changed but volume can be regulated. This control permits operation at the set as well as the remote point which may be at any distance up to 15 ft. The retail price will be below \$7.—*Radio Retailing*, May, 1934.

Freed-Eisemann 464 Auto-Radio

A single unit auto-radio with self contained power supply has just been released by the Freed Radio and Television Co., Long Island City, N. Y. It is a 6 tube superhet utilizing the new dual and triple purpose tubes (75, 6A7, 2-78, 12A5, 6Z4). Full vision airplane illuminated control unit is supplied. Set is provided with single hole mounting bolt. Tuning range, 200-560 meters.—*Radio Retailing*, May, 1934.



"Automatic" Auto Radio

A 6-tube superheterodyne motor car set with airplane illuminated dial, a.v.c., automatic tone compensation, automatic noise suppression and 6-in. dynamic dustproof speaker can be obtained from the Automatic Radio Mfg. Co., Inc., 112 Canal St., Boston, Mass. This set lists for \$49.50.—*Radio Retailing*, May, 1934.



Shortwave Lead-in Strip

So designed that when the screw is tightened on the new screw type lead-in strip of the Birnbach Radio Co., 145 Hudson St., New York City, the head of the screw forces the wire, strip, and terminal into one piece, locking them all together and assuring a good electrical contact not effected by the elements or vibration. The strip of copper is covered with a weather-proof covering. The terminals are made of brass, cadmium plated, to further insure protection against corrosion.—*Radio Retailing*, May, 1934.

Philco 32-Volt Sets and Auto-Radios

A new 32-volt all-electric radio is the latest addition to the line of the Philco Radio & Television Co., Philadelphia, Pa.

This Model 32 has been designed especially for rural residents and others who have 32-volt electric or farm lighting systems. The tuning range is from 520-3250 kc., covering the broadcast and police bands and all aircraft and amateur stations within these frequencies. It has unusual sensitivity and selectivity, the release states. Incorporates a.v.c. and uses an electrodynamic speaker. Tube line-up consists of 2-39 or 44's, 36, 75, 42, 84.

Available in two cabinet styles. Model 32B Baby Grand is \$65 and Model 32L Lowboy is \$79.50.

The \$19.95 auto-radio receiver contains the Model 11 circuit plus a large "S" type speaker, airplane dial and tone control. It is known as Model 700.

The price of Model 10 has been raised from \$55 to \$59.50 due to increased labor and material costs.

Model 800, \$75, is a 7 tube receiver with large "K" type speaker.

Model 11, recently announced, completes the line. This is a 6 tube job listing at \$39.95.—*Radio Retailing*, May, 1934.



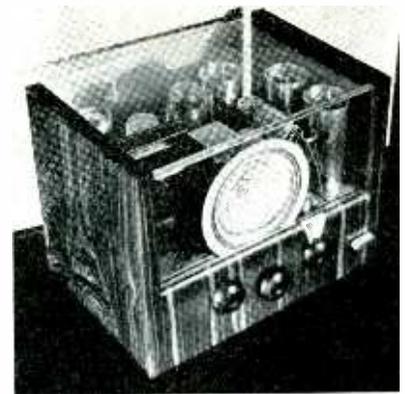
Improved "Clok-trola"

Improved both in appearance and mechanically, the new "Clok-trola" of the Advance Electric Co., Inc., 1250 W. Second St., Los Angeles, Calif., has many uses. Primarily it is made to turn the radio off and on any number of predetermined times over a 12-hr. period. For example, it is possible to set a complete evening's program on any one station, have the radio go off after you are asleep and then awaken you in the morning.

The keys which control the radio are arranged around the face of the clock, one for each half hour.

Other uses for this clock are to plug into a lamp to turn on a light in the house when you are away, turn the furnace on and off, shut off an electric fan after you are asleep and control a washing machine, percolator, etc.

This company also makes a 24-hr. commercial Clok-trola for electric signs, etc. and a minute Clok-trola which operates on intervals of one minute for use in laboratories, beauty parlor shops, hospitals, etc.—*Radio Retailing*, May, 1934.



GE "Glass" Radio Set

One of the most popular exhibits at the Industrial Arts Exposition, held last month on the 62nd floor of the RCA Building, Rockefeller City, was the "glass" set of General Electric's. To quote the designer, Joseph Aronson, this set is an example of "pure functionalism." The front and top are thick glass—an integral part of the finished cabinet—and the chassis is enlisted as a part of the design.—*Radio Retailing*, May, 1934.

G.E. 32-Volt D.C. Set

A radio designed for use in rural and farm homes where only a 32-volt direct current supply is available is announced by the General Electric Co., Bridgeport, Conn. Not only is the set applicable on farms and in summer camps, but it is also for use on boats having similar electric systems.

Designated as Model C-67, it is housed in a full-sized, six-legged console of early English design. The dual tuning range includes 540 to 1500 and 1400 to 2800 kc.

It is a six-tube superheterodyne using 2-6D6, 6A7, 6B7, 37 and 84. B battery voltage is supplied by a special design factory-sealed vibrator in combination with the type 84 rectifier tube and no soldering is required to replace the vibrator. The current consumption is 2 amp.—*Radio Retailing*, May, 1934.



"Mark-Time" Radio Switch

To turn the radio off and on automatically, M. H. Rhodes, Inc., Rockefeller Center, New York City, is marketing a switch listing at \$3.95 for the 5-hr. model and \$4.95 for the 10-hr. model. It comes with series taps. With this switch the radio may be operated by remote control, so the program can be turned on or off from sofa or easy chair.

This company also makes a wide variety of switches of all types and for all uses. There are models for controlling electrical appliances, window lights, etc. A coin meter is also available.—*Radio Retailing*, May, 1934.

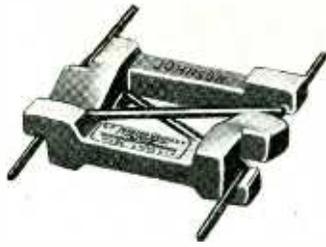
"Multi-Tap" B Power Supply Unit

The "Multi-Tap" B supply unit of the General Transformer Co., 500 S. Throop St., Chicago, supplies smooth, quiet, constant B power output voltage from the 6-volt storage battery. The drain is 4.0 amp. at maximum output. "Multi-Tap B" provides 90, 135, 180 or 250 v. at various taps on the connecting block. The full-wave vibrator used is provided with oversize contacts to insure long life.

Two types are available—full-wave tube rectifier and full-wave self-rectifying. Each lists at \$15.—*Radio Retailing*, May, 1934.

S-C Model 33A Auto-Radio

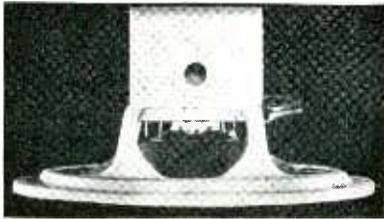
An improved auto radio, Model 33A, is being marketed by the Stromberg-Carlson Tel. Mfg. Co., Rochester, N. Y. This is a two-unit job using 78, 6A7, 6B7, 37 and 2-41. Equipped with "Q" circuit with switch, it is possible to adjust this set to almost every conceivable operating condition. The "Q" switch is located on the front of the receiver casing and can be turned on or off as needed. A new tone control and clarifier that operates in positive steps, with full power output at each of the several settings, is included. One of the most difficult problems in radio set design—uniform sensitivity over the entire tuning range—has been conquered, it is claimed. To make servicing simpler a new battery cable, detachable at the speaker power unit, has been incorporated. \$79.50.—*Radio Retailing*, May, 1934.



Johnson Doublet Antenna

E. F. Johnson Co., Waseca, Minn., for ten years makers of equipment for broadcasting stations, has developed a doublet antenna system for use with broadcast, shortwave or allwave sets. It is composed of a "flat-top" section of two equal halves, insulated where they meet at the center, plus a two-wire transposed lead-in to the receiver set. "Transposition" (crossing over the lead-in wires at regular intervals) is accomplished by means of the specially designed No. 31 transposition insulator.

The No. 320A doublet antenna kit complete with wire lists at \$4.75. The No. 300 doublet receiver coupler, with hardware, is \$1.75.—*Radio Retailing*, May, 1934.



Magnavox Speaker

Because of a wide variety of requirements covering performance and dimensions of 5-in. speakers, the Magnavox Co., Ltd., Fort Wayne, Ind., now offers a revised model of the 5-in. speaker, designated as Model 195. The mechanical design permits it to go into closely crowded receiving sets, leaving a maximum of space on all sides for other set components.

The illustration shows the space available for other components around the speaker.—*Radio Retailing*, May, 1934.

Automatic Battery Charge Control

To keep the car battery sufficiently charged to take care of the radio, the Birnbach Radio Co., 145 Hudson St., New York City, has brought out an automatic battery charge control. When the radio switch is turned on the battery charge is automatically stepped up five amperes. Thus the battery gets the normal rate of charge and the radio is taking the extra 5 amp. the generator is delivering. When the radio is turned off, the battery is still getting the same charge and the generator is reduced to the normal delivery.—*Radio Retailing*, May, 1934.

Full-Wave Inverters



A complete line of 6- and 32-volt full-wave self-rectifying inverters and full-wave inverters of the vibrator type for use in B power units of all-electric auto radios and 32-volt farm radios is announced by the American Television & Radio Co., 128 E. 10th St. St. Paul, Minn. These units are sold separately or in kit form with the transformer. They list at \$4.95 and \$5.75.—*Radio Retailing*, May, 1934.

Solar Dry Electrolytic Condensers

With the publication of its new catalog, the Solar Manufacturing Corp., 599 Broadway, presents to the trade its new "Star Midget" dry electrolytic condensers. These compact units are about half the size of standard size condensers and are available in three ratings, 525, 500 and 220 volts peak. They have been especially designed for the service trade and are of especial interest due to their unique space-saving feature.

The illustration shows two "Star Midgets" compared with a standard size.—*Radio Retailing*, May, 1934.



Lenz Shielded Low Capacity Weatherproof Tubing

The small outside diameter ($\frac{3}{8}$ ") of the Lenz Elec. Mfg. Co.'s shielded low capacity weatherproof tubing (loom) permits easy assembly in corner post of auto as shield for antenna lead-in. Excellent for shielding output of signal generators. The 50 ft. coil is \$3.90; 100 ft., \$7.40.

Also makes push-back wire, indoor aerial wire, auto-radio cable, microphone cable, shortwave lead-in wire, shielded wires and cables, speaker and head set cords, battery and speaker extension cable, flexible covered lead-in wire.

Lenz is located 1751 N. Western Ave., Chicago.—*Radio Retailing*, May, 1934.

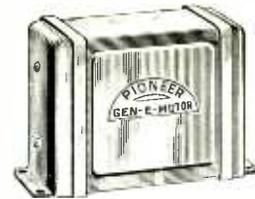


Horton Washers

Beauty of line and color distinguishes the new line of washers of the Horton Mfg. Co., Ft. Wayne, Ind.

Model 11 has standard size porcelain tub; Model 12 has large corrugated tub of porcelain; Model 14 comes with an oversize corrugated porcelain tub and Model 15, also with oversize tub, has 4-roll auto-safe wringer.

All electric models will be equipped with power driven drain pumps at slight extra cost.—*Radio Retailing*, May, 1934.



Pioneer "Gen-E-Motor"

Model JW "Gen-E-Motor," just announced by the Pioneer Gen-E-Motor Corp., 416 W. Superior St., Chicago, lists at \$13. This unit has been designed to replace the vibrator power supply in all popular auto radios. It will fit within the housing of over 20 sets, including Majestic, GE, RCA, Motorola, Bosch, Audiola and many others. Only three connections to the set are required. No other changes must be made.—*Radio Retailing*, May, 1934.

Tobe Condenser Analyzer

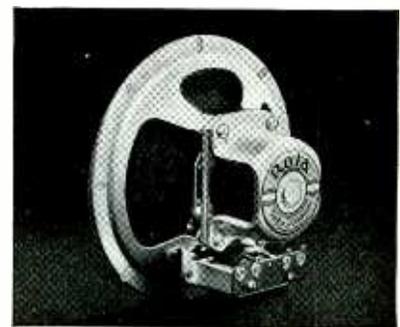
Designed specifically as an aid to the serviceman in solving the many problems encountered involving condensers and condenser testing, the condenser analyzer of the Tobe Deutschmann Corp. Canton, Mass., operates with ample accuracy and surprising simplicity.

Paper, mica and oil dielectric condensers are tested by the method of measuring the d.c. resistance under an applied voltage. The resultant leakage current is indicated on a neon glow tube indicator. Especially interesting is the complete analysis the instrument affords electrolytic condensers.

Contains a built-in power supply operating on 110 a.c. Voltages up to 700 v. d.c., are available for testing at the output terminals.—*Radio Retailing*, May, 1934.

Price Reduction on Eveready Radio Batteries

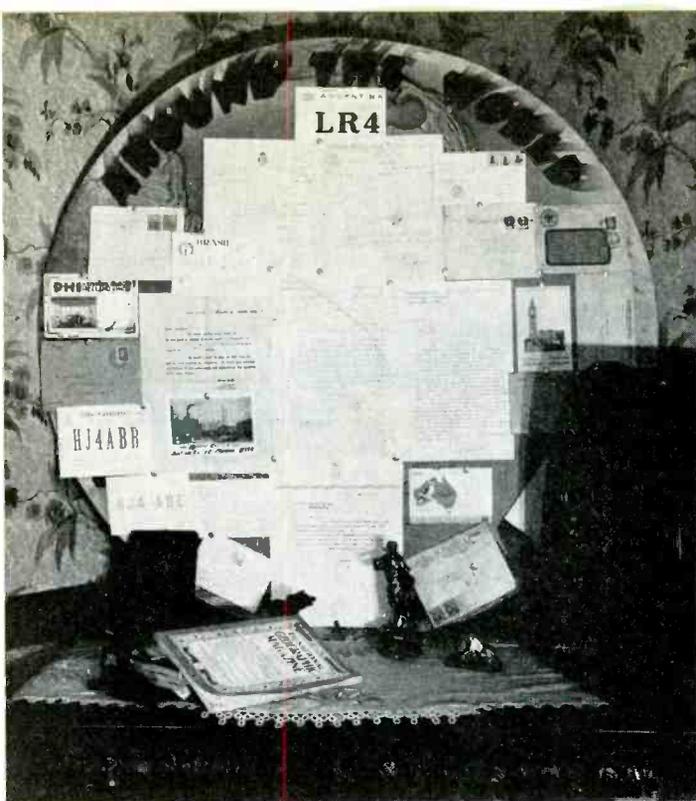
Price reductions are announced by the National Carbon Co., Inc., 30 East 42nd St., New York, on eight popular types of Eveready round cell radio batteries. This announcement applies to the 45-volt medium and large size round cells, Nos. 872, 870, 572 and 570; the 22½-volt B or C battery, No. 768; the 45- and 22½-volt portable Nos. 762 and 763, and the 45-volt police squad battery No. 794.—*Radio Retailing*, May, 1934.



Rola Dustproof Speakers

A series of dustproof units especially designed for auto radio sets is announced by the Rola Co., Cleveland, O. The new construction embodies a dome center cap, entirely new spider construction and acoustic filter assembly, which completely protects the voice coil and air gap against the entrance of metallic particles of dust and other foreign substances.

The same construction is now being applied to household sets which will eliminate the troublesome problem of metallic particles, picked up in the assembly of receiving sets, eventually finding their way into the loud speaker.—*Radio Retailing*, May, 1934.



Supreme Radio Shop, Brighton, Mass., features verification cards in shortwave display

*Exhibition of
Coveted Verification
Cards From
Foreign Stations
Aids Set Sales
Dealers Urged
To Encourage Hobby*

Shortwave

STAMP Collecting

STAMP collecting has for years been an extremely popular hobby, practiced by people in all walks of life. Butcher, baker and candlestick maker, all gloat over their pretty bits of printed paper, vie with each other for quality and quantity honors.

And now comes a new method of securing specimens from remote corners of the world . . . via *shortwave radio*. Listeners everywhere are tuning in foreign station, reporting by mail on transmissions and receiving, in return, verification cards which are themselves worth collecting and the coveted postage stamp of the country.

So universal is the stamp collecting craze that the little gummed stickers frequently become "lost" in the mails, cards arriving at their destination less stamps. Little boys "swipe" them from letters lying on the table in the hall. And friends leave standing orders for them with the listener who has no collection of his own.

Here is a hobby which plays right into the hands of the radio dealer. Display verification cards in the store window. Call attention to the stamps which accompany them. Many people will buy shortwave sets just for this feature alone.

"Veri's" courtesy Short Wave Club of New York

Radio Retailing, May, 1934



Merchandising



By Richard Gilbert

Edward Wallerstein, in charge of all RCA Victor recording projects, on both disc and film, evinced the opinion, when interviewed recently by the writer, that the most profitable future business in phonographs and records for the home will be found in the field of good and lasting music. "Records, during the past 12 months, have been staging a healthy come-back and are still on the upgrade. There is a public demand for recordings today which exceeds by over 200 per cent that which existed a year ago. If any proof be needed, aside from the actual sales figures, it may be found in the recording activity current in our studios in New York, Camden, Hollywood and Chicago.

Recording Activity Significant

"Several months ago we made a long series of recordings of the Minneapolis Symphony Orchestra," continued Mr. Wallerstein. "Practically every composition selected for engraving had been



Edward Wallerstein, formerly manager of Record Sales, has been placed in charge of all Victor record and RCA Victor Photophone film recording activities, in addition to his other duties, the RCA Victor Company announces.

Mr. Wallerstein will now supervise the licensing for Photophone high fidelity sound-on-film recording, and the electrical transcription department activities, as well as all Victor disc recording and sales.

requested over a period of time by disc collectors throughout the country. More recently, we began a new Philadelphia Orchestra series under Stokowski embracing a great number of works of proven popularity, including Beethoven's massive Ninth Symphony calling for a large chorus in addition to the usual personnel of almost a hundred instrumentalists. Heifetz, who will attract millions of radio listeners to a broadcast of his fiddling, has made a new series of Victor records, beginning with the four-disc, Strauss sonata set released this month. Rose Bampton, Richard Crooks, Lawrence Tibbett, John Charles Thomas and other prominent artists have been active before our microphones. So, you see, if the phonograph business had fallen off during the past year—in fact, if it had not

increased conspicuously—we would not be going ahead with these extensive and, in some cases, really gigantic recording projects today."

Demonstrate Quality of Recordings

It might also be pointed out that the quality of American recording has reached a point of high fidelity actually beyond the range of the best reproducers available today. The resultant product, *Radio Retailing* believes, can be made by the enterprising record dealer into a tremendously attractive piece of merchandise. Records must be demonstrated. That can't be stressed too strongly.

Nation-wide response to the pleas of the New York Philharmonic-Symphony Orchestra for a guarantee fund of \$500,000 was recently reported by committees of that organization to signify a sincere and permanent interest in music of the highest type by radio listeners. These devotees, situated throughout the width and breadth of the land, contributed liberally to the Philharmonic fund. They, and thousands of unheard-from others, are prospects for disc business. The music they admire is available in permanent form from your record stock; of course it's up to you to unearth this interest and acquaint a great number of these logical enthusiasts with recorded music. In many cases, listeners who responded to the Philharmonic plea are totally ignorant of the rich storehouse of recorded music and the magnificent tonal quality available from present-day records.

In addition to all metropolitan centers and most cities in the 100,000-500,000 population class, places like Ann Arbor, Columbus, Mo., El Paso, Ithaca, Knox-

To Help You Build a Prospect List for Records

Does your community support musical events? If so, your local concert manager will have lists of excellent prospects for phonograph and record sales.

Write to RADIO RETAILING'S Phonograph Editor. He will be glad to supply you with additional information and, perhaps, the names and addresses of persons in your city who have mailing lists at their disposal.

ville, Lawrence, Kan., Montgomery, Ala., Oberlin, O. and York, Pa., support symphony orchestras, choral organizations, music societies, music schools, etc. and entertain a number of visiting concert artists each season. There is no reason why an enterprising dealer in these and other cities cannot sell phonographs and records to a prospect list of music lovers obtainable from these musical organization.

Get Names of Music Lovers

Where there is a symphony orchestra get the names of the subscribers from the local manager. He has a list of every music lover in that community, known to him because that's how he does his business and it's exactly how you can do yours. The very best people in the community are on it; Mrs. Jones-Smith might well be envious of Mrs. Brown's fine phonograph and disc collection—that's a point for you to work on. If your city doesn't support a symphony orchestra, interview the managers of theatres and choirs, see the organists of churches and music teachers; in fact, make it a point to acquire a cross-section view of the musically inclined inhabitants of your area. Canvass these names with a direct mail campaign; invite as many as you can accommodate at a time to hear concerts of recorded music at your store. Where phonographs are already in use, ask questions relative to the user's tastes, etc. People with kindred interests don't mind talking about their hobbies and you can pick up some pertinent ideas as to what records to stock.

Follow customers who are already buying records. Send them personal letters regarding specific records which your advance lists have announced.

When getting that list of names from local symphony managers or concert promoters, ascertain the persons most prominent in the music life of your city. Call on these people in person, taking with you the latest developments in recorded music. If they haven't a new phonograph, give them a demonstration either at your store or in their own home. Make appointments of this sort. The biggest selling point right now will be found in the amazing tone quality and clarity of recent recordings. Stress this, and play the discs on an up-to-date instrument. This will lead to combination sales and follow-ups with records.

"Don't Kid Me!

nobody asks for records any more"

He's kidding *himself*, that's all. He doesn't know that record sales have shot up 200 per cent... he ought to let his customers hear the remarkable new tone of *today's* Victor Records!

IT started last year, from a small beginning—and how it's grown, this new demand for phonograph records! During the first three months of 1934 record sales shot ahead 200%... in February alone there were *3 times* as many phonograph records sold! Dealers who used to say they wouldn't touch records with a ten-foot pole are putting the remarkable new Victor records out where people can see them—and *hear* them. And are cashing in.

People are finding out that the Victor record of *today* has a crispness and definition they didn't believe was possible. Through higher fidelity Victor has obtained a new sweetness and purity of tone never before achieved in *any* kind of reproduction.

More turntables are being bought today than in the past few years. There is no longer any question of "freezing up your money" in records. Write to us today for the new Victor sales plans... also how you can cash in on the new Blue Birds, fastest selling low-priced records.

RCA VICTOR CO., INC., A *Radio Corporation of America* Subsidiary.

GET THESE NEW VICTOR RELEASES:

24613—Riptide—Fox Trot (Dedicated to MGM picture "Riptide")

I've Had My Moments—Fox Trot (from film "Hollywood Party")
Eddy Duchin and his Orchestra

24604—Love Thy Neighbor—Fox Trot (from film "We're Not Dressing")

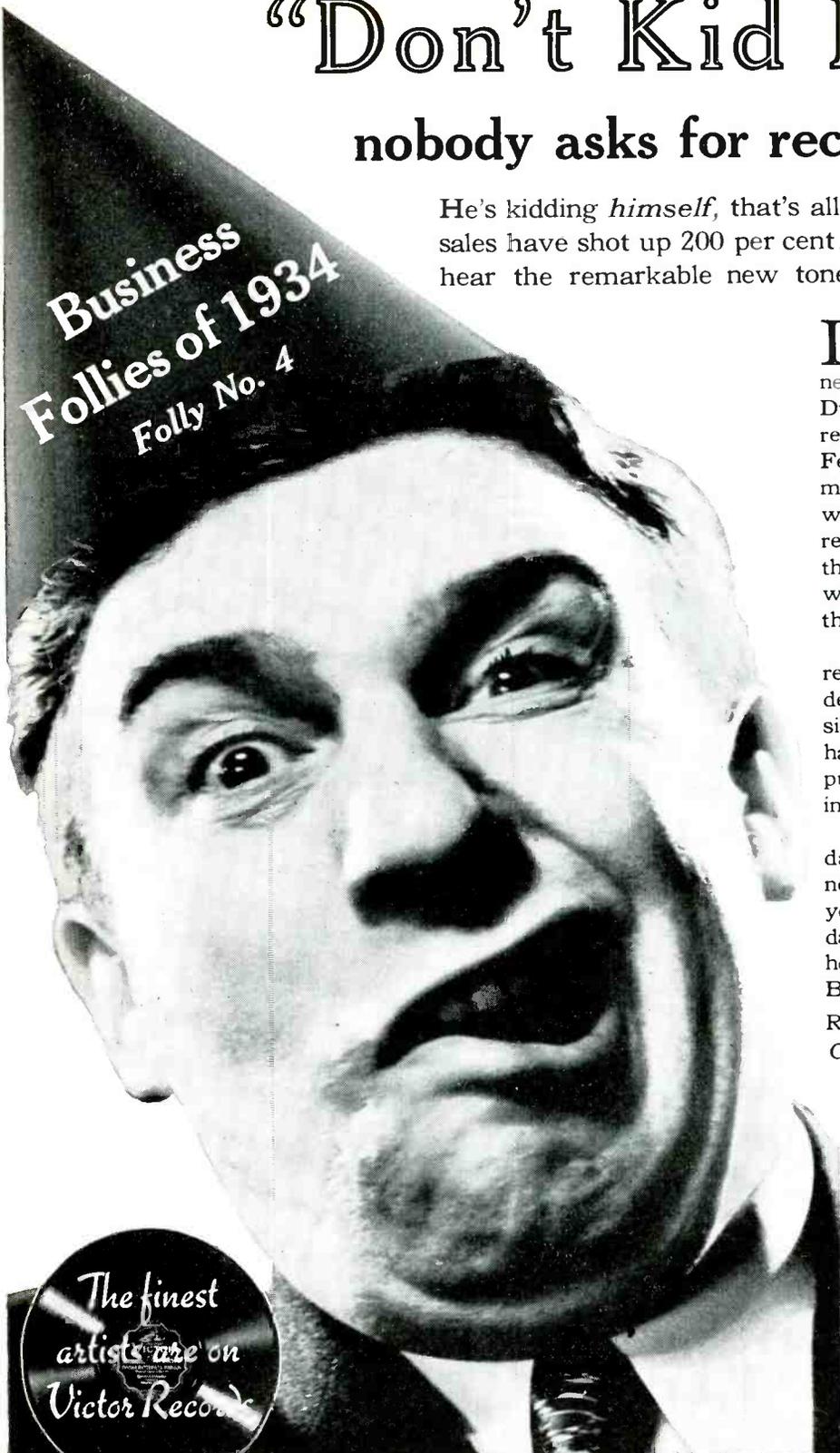
Once In A Blue Moon—Fox Trot (from film "We're Not Dressing")
Raymond Paige and his Orchestra

24594—Who Walks In When I Walk Out—Fox Trot.

Ray Noble and his Orchestra
Play To Me, Gipsy!—Fox Trot
Jack Jackson and his Orchestra

7959—Emperor Jones—Standin' In De Need of Prayer.

Merry Mount—'Tis An Earth Defiled
Lawrence Tibbett



IT PAYS TO SELL

Victor Records



RCA VICTOR CO., Inc., Camden, N. J.
I want to get in on the new increase in sales of Victor records. Please send me complete details of your proposition.

Name _____

Address _____

RR5

A NEW INSTRUMENT for RADIO SERVICE



The



CONDENSER ANALYZER

*A COMPLETE
Laboratory Instrument*

The TOBE Condenser Analyzer is a scientifically designed electrical testing instrument developed especially for quick and

accurate condenser analysis in the field of radio service.

The TOBE CONDENSER ANALYZER performs these much needed tests on all types of condensers including: electrolytic, paper dielectric, mica, and oil:

1. Measures condenser "quality" by the resistance and leakage methods.
2. Detects intermittent open and closed condenser connections.
3. Indicates "opens."
4. Indicates "shorts."
5. Identifies all types of condensers as "satisfactory" or "replace."

The TOBE CONDENSER ANALYZER contains a built-in power supply for operation on a 110 volt, 60 cycle A.C. supply. Operating voltages up to 700 volts D.C. are available at the output terminals. The instrument uses one 01-A tube as a rectifier and is equipped with one special Neon Glow Tube Indicator and 6 ft. of cord and plug.

The TOBE CONDENSER ANALYZER is enclosed in a heavy metal case finished in attractive black Damaskene wrinkle. Size of case only 3¾ in. x 4½ in. x 7½ in.

**AMAZINGLY
LOW PRICED**

Dealers' net price of the TOBE CONDENSER ANALYZER complete with operating instructions and valuable information on condenser testing, less 01-A tube, only

\$9.90

Price \$10.20 in Denver and the West Coast.

The Tobe Deutschmann Corporation being principally a manufacturer of replacement condensers has developed this product as an aid to the solution of condenser problems encountered in radio service, and for its indirect value in the merchandising of TOBE condensers. For this reason the instrument is being offered at an unusually low figure.

**TOBE
DEUTSCHMANN CORPORATION
CANTON — MASS.**

USE THIS COUPON—Order Today



**TOBE DEUTSCHMANN CORPORATION
Canton, Massachusetts.**

Gentlemen:
Enclosed find check money order for \$9.90 plus for postage. (Shipping weight of instrument 6 lbs.)
Kindly send me one TOBE CONDENSER ANALYZER complete with operating instructions.

NAME

STREET

CITY STATE

My parts jobber is

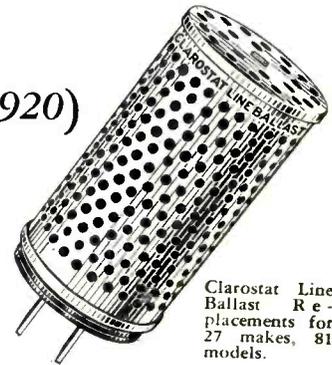
Address

"A Service Reputation is no better than its Parts"

.... to those who value reputation

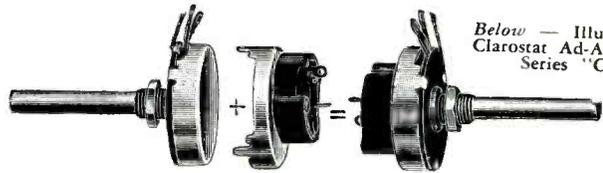
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Ballast and Volume Control Replacement Guide upon Request

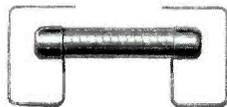
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CARBONIZED
To 200 watt
WIRE WOUND



1 watt Carbonized



5 to 15 watt
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Please send us your Catalog R341 on Morrill Condensers and Resistors.

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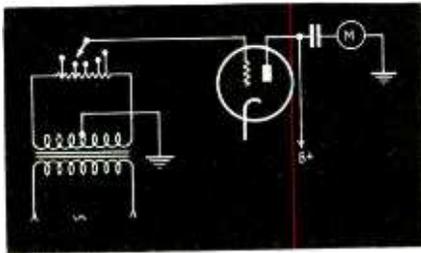
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30 Church St., New York, N. Y.

RR

Every radio set now being sold and added to the 18,000,000 now in use in American homes adds to the opportunities of radio service men and dealers doing service work. Every set sold adds to the opportunities of the makers of radio replacement parts and accessories. Every set sold makes more important the advertising opportunity offered by the "Service and Installation Section" of *Radio Retailing* . . .

SERVICE SECTION

vider resistor connected across the transformer secondary is tapped to apply approximately normal signals for various tube types and to keep the output meter on scale.) A 0-1 ma. move-



ment rectifier type meter, condenser coupled in the plate circuit, measures amplified a.c.

The meter scale is factory-shaded in "good" and "bad" sections.

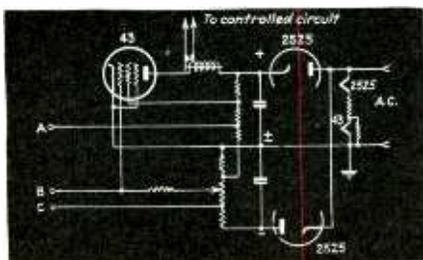
25Z5 Supplies Plate And Fixed Bias Voltage

The Westinghouse type LE photocell relay uses a 25Z5 rectifier in a unique manner. One half of the tube supplies plate and screen voltage for the 43 amplifier while the other half develops fixed bias voltage for the control grid. It occurs to us that the idea may possibly have some application in connection with radio and public address amplifiers requiring fixed bias. (Constants are not available but experimentation with different values would no doubt be necessary for other applications anyway.)

Approximately 100 volts is available between the cathode of the upper rectifier section and the center-tap between the filter condensers. A divider is connected across this circuit and the proper taps taken off for plate and screen. A similar divider system is connected across the lower rectifier output. Variation of the tap on this lower divider, it will be seen, makes the grid more or less negative with respect to the cathode, permitting selection of the proper "trigger" point.

Note that part of the divider system is common to both sections of the rectifier. Apparently excessive voltage is developed by the biasing section of the 25Z5 and it is reduced to suit the tube's requirements by permitting the two sections to "buck" slightly.

Where closing of the relay is required when light shines on the photocell the



Radio Retailing, May, 1934

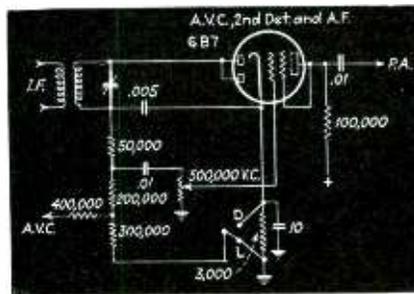
cell is connected to A and B and the potentiometer set "down" (on the circuit diagram) for minimum plate current. Where opening of the relay is required when light is interrupted the cell is connected between B and C and the potentiometer set "up" for maximum plate current.

Local-DX Switch Uses "Bias Bucking" Circuit

An unusual local-dx sensitivity adjusting switch arrangement is used in Colonial's model 164 auto-radio.

A.v.c. voltage is developed across a 300,000 ohm resistor in the diode detector and automatic volume control circuit of the 6B7 diagrammed and applied in the usual manner to preceding r.f., detector-oscillator and i.f. grid returns. The cathode return lead of the resistor is, however, connected to the center-leg of a single-pole, double-throw switch, the two outside legs of which go to the respective terminals of the 6B7's bias resistor.

Now the r.f., detector-oscillator and i.f. stage tubes are equipped with a 400 ohm resistor (not shown) in their common cathode lead. This provides fixed



or residual bias which keeps the grids somewhat negative irrespective of a.v.c. potential or local-dx switch setting. When the switch is in the local position, illustrated, the tubes receive relatively high bias from the 400 ohm resistor and a.v.c. action. But when the switch is thrown to the dx position the 6B7's bias is applied to the controlled grids in opposite polarity to the residual and a.v.c. bias.

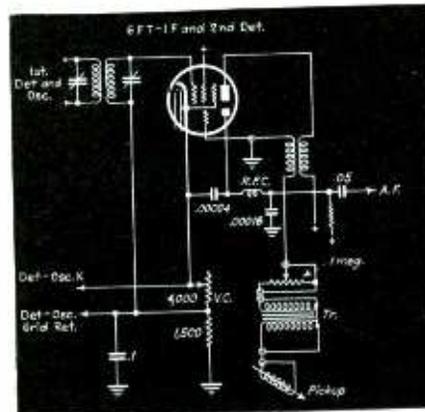
Thus, with the switch in the dx position, bias is lower and gain increased.

6F7 As I. F. Amplifier, Second Detector

The 6F7 triode-pentode is most commonly used as an oscillator-detector. Here's the tube working as a pentode i.f. amplifier and triode second detector. The set is GE's Model M49 (RCA Duo 301).

I.f. is applied to the control grid of the pentode. The gain in this (and the detector-oscillator preceding it) is con-

trolled by means of a 4,000 ohm variable self-bias resistor in the cathode lead.



Amplified i.f. passes from the pentode plate circuit to the control grid of the triode portion, through a transformer. A 1,500 ohm fixed resistor and the 4,000 ohm volume control, in series in the cathode, supply triode self-bias.

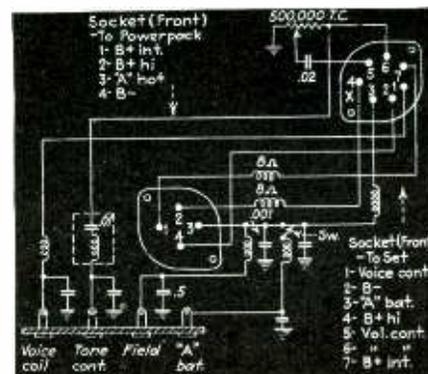
A 1 megohm variable resistor connected across the secondary of an input transformer is included in the triode grid circuit. Thus the output of a pickup may be applied to the grid. No switching system is provided to cut the pickup in and out so it is necessary to operate the circuit with the receiver volume control turned down when playing records and to operate the pickup volume control "wide open" when listening to broadcast stations.

"Eliminode" Filtering

Galvin has taken great pains to avoid transfer of "hash" to the r.f. circuits of its "Twin-8" Motorola auto-radio model via the leads between external controls, speaker or battery and the main chassis.

Here's the "outer housing" circuit showing the rather elaborate system of r.f. chokes and by-pass condensers. The vibrator interrupter-tube rectifier type powerpack plugs into the lower socket. The upper connects to the main receiver chassis.

Socket plugs are shown as they appear when looking into the front of the housing.



"ALLWAVE" ANTENNA DESIGN

Some Notes on the Theory and Practice

By ROBERT S. KRUSE

TWO separate anti-noise antennas are, theoretically, advisable if the best "all-wave" reception is to be obtained:

- A—A long antenna for use in the 550-1500 kc. broadcast band.
- B—A special antenna for the shortwave region of 1500-15,000 kc.

This is not practical in most locations, nor does the average set user care to bother with a dual system. We must accordingly compromise between the needs of the two ranges.

In shaking down to a practical compromise let us see what noise-reduction depends upon.

Noise can come from several sources and can reach the set by a variety of routes. Let's take them one at a time.

Static can be combated only by listening to strong stations.

Self-generated noises, especially "shush" and irregular buzzing or humming, are present in many cheap "all-wave" receivers due to defects of design, sometimes in the set, sometimes in the tubes. Some of the "pentagrid converters" seem to be bad offenders in this regard, though in carefully designed sets they work very acceptably.

If the set is noticeably noisier when switched to short waves, take off the antenna and repeat the test. If the noise persists (especially the "shush") better try another set of the same make before fooling with the antenna.

Man-made electrical noise, apart from that born in the receiver, can reach the set via the antenna, via the power line, or via a badly-placed ground connection. Therefore, noise must be reduced by:

- 1—An antenna that does not collect noise.
- 2—A ground lead that does not collect noise.
- 3—A set designed to keep noise from entering via the power line.

The purchaser is almost helpless as to point 3 and must rely on the set designer's skill. If different sets are compared for noise be sure that a tonally bad set does not get the best of the comparison. Sets sometimes seem quiet because the things have poor high-note reproduction. Noise is largely in the treble area, hence a set deficient in highs sounds quiet. Note whether the "s", "f" and "th" of spoken speech come through well. If not—the

static or the tenors are so severe as to require it.

Quiet Ground Leads

If anyone suggests the installation of an all-electric shortwave receiver without a ground wire, or suggests running a ground wire to an electrical outlet—shoot or call the police. This man is a menace.

A set so installed has no ground connection *except the main source of our radio noise*. It is irrational to go to the birthplace of noise when we wish to avoid noise. Of course I realize that this sort of thing is usually due to over-crowding by the boss, the poor devil of an installer being required to "get through and get out"—but it's bad.

The best ground connection is probably one buried outside the house, where it is definitely clear of all light wiring. For the small-town dweller 6 to 10 feet of rod or pipe driven down, or 50 feet of wire buried in a shallow trench, settles the grounding business for keeps if he uses a good-sized wire that will not corrode off.

For the city man it's not so simple and he is referred to the waterpipe, the steam-pipe and the gaspipe in the sequence mentioned. They become noisier as one goes higher up in the building, especially if there be elevator controls aloft.

The Antenna

Having gotten rid of some 50 per cent of the noise sources we now go to the remaining one—the antenna itself. The principles of anti-noise antennas are simple enuf. The general idea is:

- a. To collect the signal in a noise-free space.
- b. To avoid metallic connection to things filled with noise.
- c. To take advantage of any "polarization" of the radio waves.

The Simple, Large Antenna

The very great advantage of merely lengthening an ordinary antenna seems to be little appreciated. This is the first thing to try in any case of moderately bad noise. The effect is that of Fig. 1. In many instances nothing else is required to convert most annoying reception to very good reception, *especially* at short waves. The obvious lesson taught by the drawings is that noise often starts in the electrical wiring of the house—but *doesn't travel far*.

The Shielded Leadin

Where the noise situation is very severe it no longer suffices to extend the antenna out into a noise-free-region; we must also *prevent* collection in the noisy region at the house. Apparently, the obvious way to do this is to shield the antenna when it gets near the house. If this is done in the manner of Fig. 2A, reception will be quite poor for reasons that we need not worry about here, but which have a good theoretical explanation.

This can be corrected for a narrow range of frequencies by means of a transformer placed at the end of the shielded leadin. (See 2B). Such a transformer can be made to work over the 550-1500 kc. band

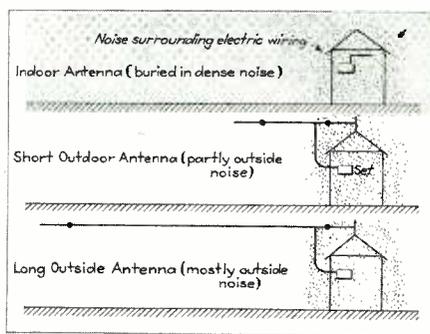


Fig. 1 — Why a long outside antenna often increases signal-to-noise ratio

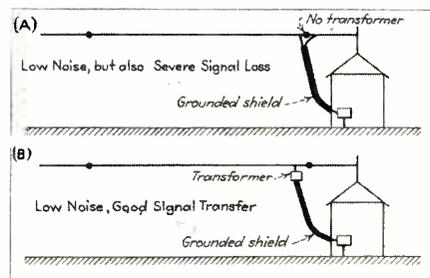


Fig. 2 — Shielded leadins, good (B) and not so good (A)

alleged noiselessness may be simply a poor audio system. A good audio system can always have its top end spoiled at will by means of the "tone control" when the

very nicely indeed, and a number of good types are on the market. Note, however, that the shielded line is now only a power-transmission line. It is no longer a part of the antenna and collects no signal. The "top" of the antenna should therefore be somewhat longer than would be necessary for an ordinary unshielded antenna.

For Shortwaves

Most unfortunately we have not yet learned to make this sort of shielded antenna very efficient at short waves, which is to say, in the frequency-range of 1500 to 15000 kc. (20 to 200 meters). Our transformers refuse to work well over so tremendous a range of frequencies, and the line losses are severe.

The Hertz Antenna

So far we have talked about antennas which use a ground connection. Marconi first used such antennas, accordingly we call them Marconi antennas. Observe (Fig. 3) that there is always more or less "up and down" to them. They start at the earth and go up. Sometimes they go horizontally also, but invariably they go up. In a moment we shall show why that is important.

Now the Hertz antenna uses no ground connection whatever. Accordingly it need not run up and down at all; we can make it a straight horizontal antenna if we feel like it. For the best shortwave reception we *do* feel like it, as you shall see.

A Small Dose of Theory

Near the radio transmitting station the waves are departing in the manner of Fig. 4A. They are mainly vertical, and are best received by a vertical (or partly vertical) receiving antenna—an antenna that has some height. The Marconi antennas of Fig. 3 will work best for such reception, as will the *vertical* Hertz type of Fig. 3.

At a great distance we have a different picture. For reasons which would be very dreary and tiresome we find our shortwaves now arriving in the manner of Fig. 4B. It is at once apparent that this leaning of the waves ("polarization toward the horizontal") gives the *horizontal* Hertz antenna a chance which it did not have on the nearby reception of 4A. For that reason the horizontal Hertz antenna is very useful in shortwave long-range reception.

But—that isn't all. Our *noise* comes from nearby sources and a good part of it is vertically polarized, hence does not greatly disturb the tranquil meditations of the horizontal Hertzian antenna.

The Practical Form

Getting back to things you can see, and have to pay for, let's see how such a thing looks in practice.

To get it out of the worst noise, and to keep it from being "shadowed" from incoming signals, we must of course put it up in the air as in 5A. Few people care to hang on the middle of an antenna, with a receiver under one arm, hence we must somehow lead the collected signals down to the living room *without* allowing the lead-in to collect either signals or noise and *without shielding* to produce the losses we

talked about some paragraphs ago, and *without transformers up in the air which are unwilling to work from 550 to 15,000 kc.*

There is not as yet a perfect answer to this rather messy set of requirements, although we can provide very good answers for *one* frequency, such as the 49 meter (6100 kc.) broadcast group. The difficulty in making a system work over a wide range of frequencies lies in the fact that we have no way of tuning the antenna because it is off at the other end of a long power-transmission line. (In the usual receiver the antenna may not appear to be tuned but since the antenna passes through the receiver it is indirectly tuned to some extent by the first tuned circuit.)

One practical compromise is to use the

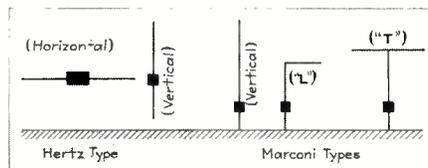


Fig. 3 — Hertz (ungrounded) antenna types are becoming more and more popular for shortwave work

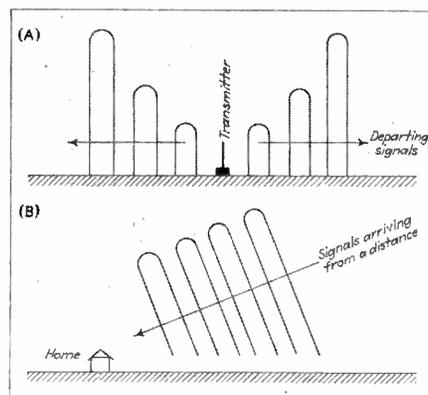


Fig. 4 — Why vertical receiving antennas are best on locals, horizontal types ok for dx

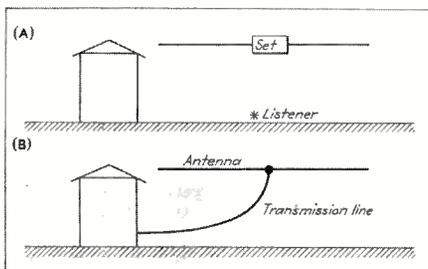


Fig. 5 — The theoretical ideal (A) and the practical substitute (B)

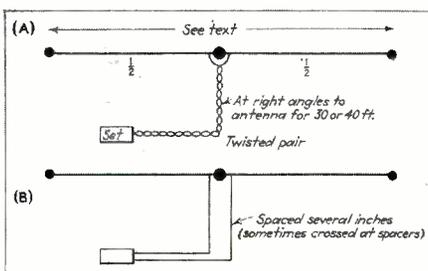


Fig. 6 — Two efficient transmission line systems using Hertz collectors

form of antenna shown in Fig. 6A. If we make the top about 70 or 75 feet long the best performance will appear in the 49 meter band just mentioned, but at other wavelengths the line no longer acts as a pure line: the upper part participates in varying degree in the antenna action, and the losses very materially with frequency. However a theoretical shortcoming can often be tolerated commercially, and the extreme simplicity of this arrangement must be evident to all beholders. Its anti-noise action leaves little to be desired, it is easy to erect, the line can be of any convenient length upward of some 40 feet (be sure to use that much and coil up any you don't need inside the set cabinet), and strong wind does little damage.

Of course there are limitations; the rubber covering of the two leads has to be of correct composition to withstand weather, of proper thickness to secure decent transmission down the line, and the braided covering must be of a form not favoring water-retention.

The Fly in the Ointment

The *real* shortcoming of this or any other horizontal Hertz type lies in the relative ineffectiveness of such an antenna at 550 kc., that is "at the WEAf end of the dial"—as we easterners say. To make the antenna long enuf to get around this difficulty results in preposterous clumsiness. Accordingly one must either accept reduced reception in the ordinary broadcast band for the sake of noiselessness (frequently a good exchange) or else one must use some arrangement for converting this antenna to another type for that band.

The "Folded Hertz" Antenna

In Fig. 6B we have an antenna system which is commonly spoken of as having a transmission line. However, one can with greater correctness say that this is simply a long antenna folded up. The fact that the line is actually part of the antenna is demonstrated by the fact that tuning is possible at the lower end of the line with the same effects *in kind and in degree* as if the whole thing were straightened out.

If tuned to the incoming signal such a system will in some cases give better performance than that of Fig. 6A. If left at some fixed tune the system shows less advantage over that of Fig. 6A. The greater complexity of such an antenna in practice is due to the necessity for using numerous insulators to keep the dual downlead separated by several inches without allowing the two wires to rub together. However, for the ardent "fan," willing to operate an extra control or two this antenna is "something."

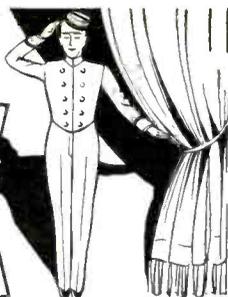
Antenna Direction

If we look down at the top of various antennas we see the *ideal* directional effects shown in Fig. 7. These are modified materially by surroundings and must not be taken too seriously.

However, a New Englander interested in shortwave reception a Marconi antenna should theoretically point (free end) a little west of north if he is after YV3BC at Caracas, Venezuela, or about west for the best average European reception—but

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These testers incorporate a 3½" Triplet Precision Meter, which has a shaded two-color scale. It indicates in simple English that the condition of the tube is either "good" or "poor." No longer need you reassure skeptical customers as to the worth of tubes that you are testing for them.

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. . . with the No. 421 (counter tester) at the dealer's net price of \$24.00—and with the No. 422 (portable tester), at the dealer's net price of \$25.50. These testers come in a beautiful quarter-sawn oak case.

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City State

A Fertile Market

THERE exists in the United States today a market for the replacement of over 100 million radio tubes annually. A properly merchandised stock of tubes turns over many times each year and yields a goodly profit. Ken-Rad Radio Tubes, manufactured according to the highest standards and noted for dependability and long life, are profit-makers. Write for information.



Ken-Rad
Radio Tubes
DEPENDABLE LONG LIFE

THE KEN-RAD CORPORATION, Inc., Owensboro, Ky.
Division of The Ken-Rad Tube and Lamp Corporation
Also Mfrs. of Ken-Rad Incandescent Electric Lamps

CANDOHMS

ARMoured WIRE WOUND RESISTORS
STANDARD EQUIPMENT IN LEADING SETS

REPLACEMENT CATALOG

NEW COMPLETE CATALOG NOW READY
SEND TODAY FOR YOUR COPY

THE MUTER COMPANY

1255 South Michigan Ave., Chicago



**WET AND DRY ELECTROLYTIC
PAPER AND MICA CONDENSERS**

RECOGNIZED FOR
SUPERIOR QUALITY
IN ALL CLIMATES
THE WORLD OVER

SOLD BY LEADING
JOBBERs EVERYWHERE

SOLAR MFG. CORP.
599 BROADWAY
NEW YORK

BEST BY TEST!

ASK FOR
CATALOG
OF EXTREMELY
COMPACT TYPES
HANDY FOR SERVICE

SERVICE SECTION

unless the antenna is 4 or 5 times as long as it is high nearly anything between the two will answer.

The Hertz type, for the same man, should run more or less SE to NW, tending toward an East-west rather than a north-south position for Venezuelan reception.

In another part of the country—look at the globe. The flat map is a liar on these things. And don't be too "finicky" about direction.

Height, and Length

As to height . . . get above the noise-making wires if you can. At any cost stay away from elevator penthouses and such like special infernos of noise.

Length has already been indicated for the Hertz 49 meter antenna, but *overall* lengths (tip to tip) of 60 to 75 feet will be found most desirable for shortwave work—the regular broadcast response going down with length unless one uses some conversion method as previously indicated. In an old set not equipped for conversion an external switch can be rigged up to tie the two leads together for ordinary broadcast reception, bringing both to the "Ant." post, and grounding the "Gnd." post as usual.

Where a pure Marconi antenna is to be used an antenna of 25 or 30 feet is being publicised as a nice compromise—but it is pretty terrible from a noise standpoint, being so short as not to have even its nose out above the surface. (see Fig. 1.) If noise is your problem use an antenna about 120 feet long and a receiver with enuf tuned circuits so that such an antenna does not cause undue interference between stations.

Grounded Chassis

There is room for argument as to whether the receiver chassis should be *designed for* grounding on the regular groundlead, on a separate one, or not at all. However that is a design problem. After the receiver is in the warehouse one has to use it as it is unless given to tinkering.

Accordingly one simply has to run the dual download systems to the two posts that are provided, and remove the groundlead from one of them. In most cases the results are surprisingly good, tho again this is not the ideal method.

Line Filters

A good noise-filter in the 110 volt line which supplies power to the set is worth thinking about, and trying. A special antenna may not be necessary at all—try it and see. However do not pick a noise filter the size of a walnut when you have a bad noise situation.

Another Small Dose Of Theory

In the old vaudeville houses it was customary to use a movie "short" to "run the audience out" before the next performance. Let's use that idea by going back to some theory.

Impedance-matching devices are in order where narrow-band operation suffices. Such a device can be made and certainly

does cut down the losses. The theory here is not complex. The antenna as "seen" by the line has a relatively high impedance. The line itself has a low one because it uses solid insulation and has its two conductors (the wire and the external shield) close together. Thus we need a small radio-frequency step-down transformer

in the antenna circuit, but only a part of them in the download circuit. It therefore acts as a step-down auto-transformer, producing in the line a slightly larger current and lower voltage than otherwise. Since the line losses were mainly in the rubber, these are thereby reduced—altogether aside from reflection losses. Replace this transformer annually.

At the Receiver

So far we have nimbly skipped over the input device at the receiver, that is, the device between the line and the receiver. This is ordinarily built in and hence a problem of the manufacturer. The set having been finished we can only hang on an additional external device, or do some work inside the set. It is perfectly possible to do this, and it is easy enuf by simple listening test to determine whether the change caused an improvement. Not always do we find that an additional external transformer improves matters, since its losses may do as much harm as impedance matching does good.

Try it and see—and be sure to try it over the entire frequency range, for the results are not uniform.

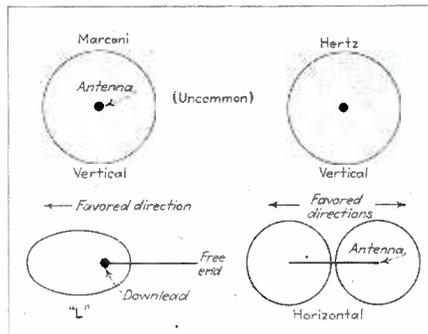


Fig. 7 — Directional effect is rarely audible but here's the dope for "hair-splitters"

between the two. It is ordinarily made of a coil wound in either "scramble" or "universal" manner. All of the turns are placed

Wind-Driven Charger

By B. O. Bass

There is a good market for inexpensive wind-driven battery generators in my rural district. I carry a gaudily painted propeller on all service calls out in the farm districts to attract attention and have even sold sets on the strength of charger sales, making it easy for the customer to keep his set running without traipsing to town every couple of weeks.

The chargers sold are home-made. The propeller is a single stick for windy hills or a double cross-stick (morticed) for light breeze operation. It is cut from a 6 ft. pine board 1 inch thick and 7 wide. The pulley or gear wheel of a car generator (complete with cutout) is bolted or

screwed to the exact center of the prop.

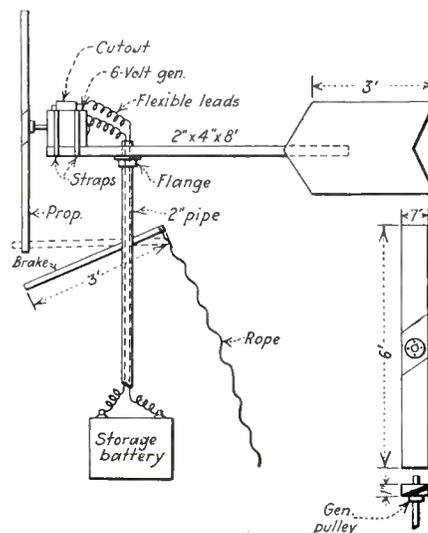
To cut the correct propeller angle in the sticks make the blades about 1/4 in. thick, cutting them from one corner to the opposite corner, then varnish or paint. Make sure the propeller turns in the right direction with relation to the generator.

Strap the generator with 1 inch wide metal strips to the end of an 8 ft. length of 2 by 4. The whole assembly is pivoted at the exact horizontal balancing point of this completed assembly on a 2 inch pipe with flange, through which the feeder wires are carried. The leads should be at least as heavy as No. 14 and the battery kept as close as possible to the generator.

A stop-brake which engages the blades of the propeller when a rope is pulled is included.

The charging rate is between 3 and 8 amps., depending upon wind velocity. The cutout protects the battery against discharge through the generator when there is no wind.

(Ed. Note: The device could be improved by using some kind of wiping contacts at the top of the pipe instead of the flexible leads, which might conceivably "wind up," and by using a friction brake of some simple design, contacting the generator shaft, rather than the system shown, which eventually injures the prop.)



Cheap Dome-Light Choke

By V. W. Hodge

The low-resistance secondary of a discarded output transformer, with or without the iron core, makes a swell r.f. choke for car dome light wires where a by-pass condenser does not do the trick.



Nothin' wrong with this boy.

If you ask us he's a tough hombre . . . he ought to be . . . for he was Baptized with Fire at 2700 degrees and he's vibration proof, heat proof and moisture proof.

On that next replacement job try a CENTRALAB FIXED RESISTOR and note the difference. Good business too . . . for the customer won't be coming back with a squawk.

At your jobber . . .



Centralab

CENTRAL RADIO LABORATORIES
MILWAUKEE, WIS.

RESISTORS

CABLE ADDRESS "CENTRALAB"

Automatic Record Changer Plays both 10" and 12" Records



CAPACITY

Plays and automatically changes eight 10" records or seven 12" records at 78 r.p.m. or 33 1/2 r.p.m.

COMPACT

Requires small cabinet space for mounting

REMARKABLY SIMPLE

No intricate working parts to get out of order

SELF-CONTAINED

Shipped complete ready to drop in cabinet

FINISHED

in pleasing statuary bronze

IMMEDIATE DELIVERIES MAY BE HAD

Product of

THE GENERAL INDUSTRIES CO.
Elyria, O.



For Farms—Ships
—City Apartments
—Automobiles

Wherever the current supply is D.C. use JANETTE Rotary Converters to operate your AC receivers.

JANETTE Converters are filtered to give radio results as good as, or better than, those obtained with central station AC. Built to outlast the radio set.

Available in 15 sizes. Capacities from 20 to 2500 watts. Input voltages of 6, 12, 32, 115 or 230 volts. Standard machines deliver 110 volts, 60 cycles AC.

Below: Gas engine-operated JANETTE 110-volt, 60-cycle generator. Capacities: 300 to 3000 watts. Ideal for sound-trucks, amplifiers, P.A. systems, etc.

MAIL COUPON FOR DETAILS

JANETTE MFG. CO.
555 W. Monroe St.
Chicago, Ill.

Gentlemen: Please send prices and details on your:

- Rotary Converters.
- Auto-B-Power (B-eliminator for auto-radio).
- Gas Engine Generators.

Name
Address
City State



SERVICE SECTION

TRICKS of the TRADE

APEX 46. Distortion on low volume after tubes are replaced . . . Remove old volume control, which is simply a cathode resistor in the 24 circuits, and replace with 10,000 ohm tapered unit, connecting one side to antenna lead, center arm to ground or chassis, other terminal to cathodes of 24's through 250 ohm fixed resistor. Break in wire wound resistor where old control was connected should be closed with jumper.

BOP. Strain on speaker cable breaks connection inside female plug . . . Connections usually broken are either 89 plate lead or B-plus center-tap of output transformer. Indicated by lack of plate voltage on one or both 89's. To repair, slip back shielding over cable about 1 inch, turn the plug cover and slip it back, exposing the lugs and the broken connection. Chevrolet set and some United Motors models require connection from speaker frame to radio chassis when placed on bench. Similar in this respect to older Spartan multi-unit models of home radios. The two wires carrying "A" current in the cable are "hot" A and switch leads. The "A" return is made through the metal firewall of the car.

CHEVROLET '33. Noise, when passenger is seated in front . . . Place shield plate of tin beneath floor boards where feet rest and ground.

CHRYSLER "AIRFLOW." Failure to find built-in antenna lead . . . It is brought down the right front corner post, as usual, but is then carried several inches farther, down toward the floor inside the post and then brought out. Necessary to remove screws holding leatherette covering post, reaching behind it for wire. Sets are easily mounted on upper part of bulkhead. Care should be taken that mounting bolts do not extend over one-half inch beyond engine side of firewall as this will prevent opening and closing of hood. In most cases no bond between motor block and frame is necessary. Shield antenna lead up to 1 inch within corner post.

F O R D - MAJESTIC. Persistent motor noise when antenna is off . . . Due to leakage through ventilating louvres in back of case. Cut piece of copper screen same size as back of chassis and fasten to case over louvres with self-threading screws holding the case together.

GE B40 (RCA M30). Fuses blow immediately upon being installed . . . Most often caused by shorted .03 mfd. condensers in vibrator base.

GRUNOW 7A. Motorboating and blocking . . . Due to two large square

coil shield cans mounted together under condenser gang working loose. Ground with heavy wire from each can to chassis.

INTERNATIONAL KADETTE.

Voltages normal but no reception . . . Insulating washers between gang condenser and chassis often slip, allowing condenser to short. Loosen screws, re-set washers and tighten.

KENNEDY AC-DC. Audio howl not due to tubes . . . See if one connection of volume control is touching speaker frame intermittently at frequency of howl.

LYRIC J. Distortion . . . Usually caused by 500,000 ohm center-tapped resistor located near power transformer opening. Replace with two 250,000 ohm, 2 watt types in series.

MAJESTIC 20. Continuous sizzling . . . Open chassis at left side from rear (tone control side) by taking out side flap. (Bottom cannot be removed without unsoldering chokes.) Clip tone control condenser lead. Although switch cuts this out many users don't know it is a tone control and it is usually jammed on low tone shortly after the purchase. Replace, if tone control is used, with .03 mfd., 600 volt tubular.

MAJESTIC 70. Fading . . . Don't trust plier-tightened knurled nuts on powerpack terminal strip. Remove top strip and tighten all hexagonal nuts on the bottom mounting. If these are loose screw heads underneath will not make contact with lugs. Open a.f. 26 bias resistor . . . remove knob from hum control at rear of chassis. Remove nut holding hum control and insulating bushing. Replace without insulating bushing and set will play with good volume but bad hum. Sell customer replacement control job. Intermittent buzzing . . . Generally a cathode to heater short in 27 tube, when heated.

MAJESTIC 90. "Burping" on dance volume . . . Usually due to poorly matched 45's. Speaker rattle . . . Smear the overlap of the cone with collodion. Sometimes it is necessary to remove the wires which normally hold the overlap in place.

PHILCO 511. "Quivery" reception . . . Check for partial open in voltage divider section feeding the r.f. plate.

PHILCO 5. Oscillations and code signal interference between 500 and 750 kc. in Transitone model . . . Usually due to defective condenser connected between plate of output 41 and ground, located directly beneath socket. Replace with .006.

PHILCO 111, 112. Poor sensitivity and tone . . . Replace resistor number 8 with 75,000 ohms. This peps up both models.

PHILCO 19, 89. Intermittent cutting in and out, no voltage changes noticed . . . Replace condenser number 30 (3903T) and number 27 (3903AB). They can be bridged with a 600 volt, 0.5.

PHILCO 91X. Hum, developing after few hours of use, accompanied by distortion . . . Replace input push-pull audio transformer. Secondaries are sometimes faulty.

PHILCO 5, 7. Scratching noise when tuning . . . Tighten volume control nut in chassis and be sure it is well grounded.

RCA. Noisy or erratic reception in recent models using a 745 mmfd. fixed condenser as oscillator coil padder . . . Replace with condenser of same value removed from oscillator grid lead and replace grid condenser with stock unit having approximately same value. Padder condenser value is critical and stock replacement will not do while grid condenser value is not critical.

RCA R32, RE45, RE52. Low volume, all plate voltages ok . . . Check for loose connection on power plug into pack from chassis. Spring contacts on female section frequently corrode sufficiently to reduce heater supply values.

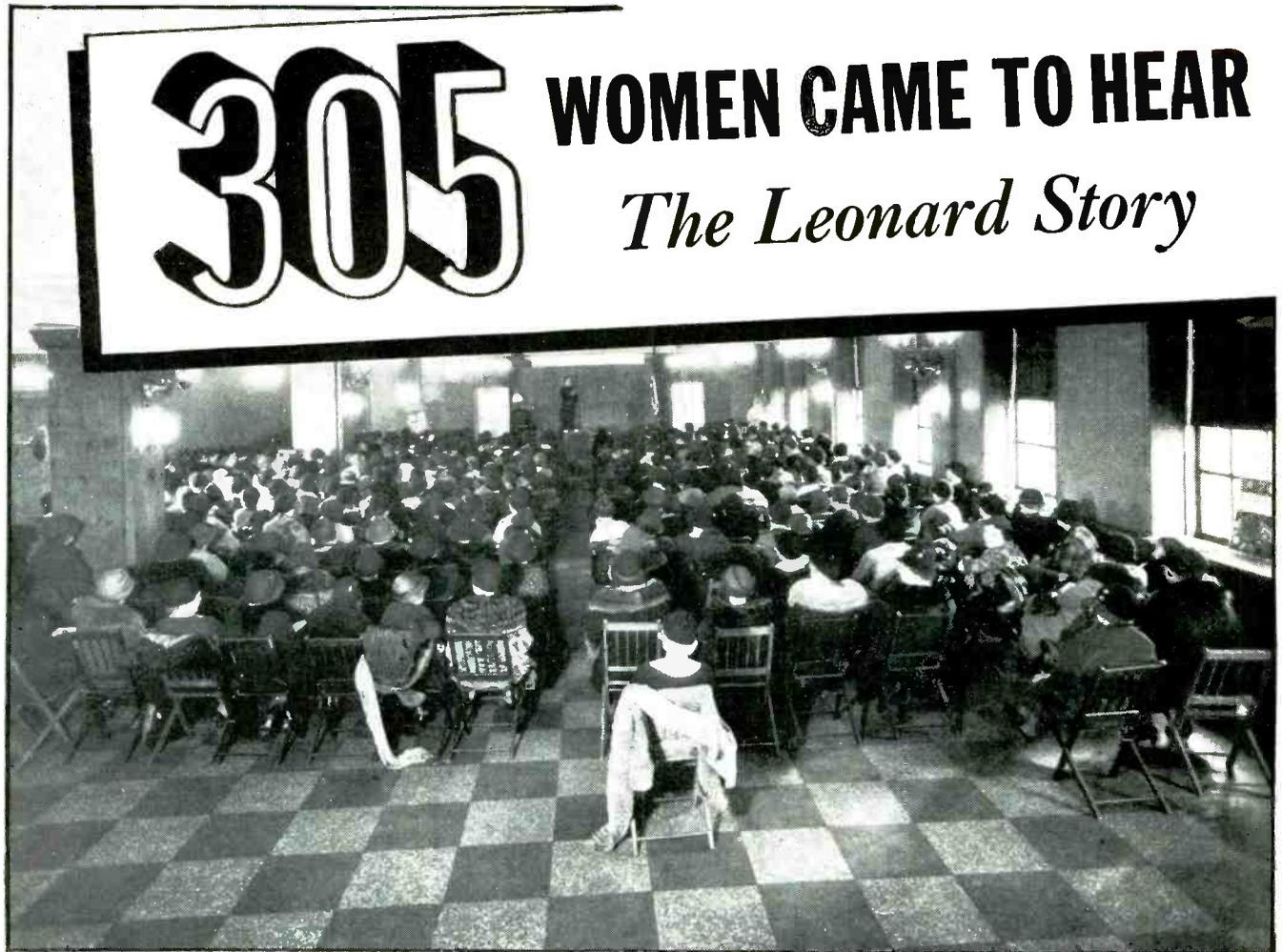
RCA 100B SPEAKER. Burned out coil . . . Re-wind bobbin full of No. 26 d.c.c. copper wire, then use a dynamic speaker output transformer with a low impedance secondary. This will give improved tone and volume.

SILVER 30. Dial belt will not stay in groove . . . Chip "V" deep enough to allow cable to come flush with surface of pulley, wrap fine wire around ends of cable, then tin. Also tin the "V" cut in pulley, then solder cable to ends of "V."

STEWART-WARNER. Loss of volume or sensitivity after defective by-pass condenser is replaced . . . Sets are critical as to by-pass condenser values. Use exact original value of tubular type condenser, avoiding metal-cased replacement units.

STROMBERG 641, 642. Noisy volume control . . . Replace rear unit. Fading . . . Try replacing the front volume control unit. Continual static . . . Discard primary of push-pull transformer and go to resistance coupling, using 25,000 or 50,000 ohm plate resistor and .01 blocking condenser. Peculiar buzz or hum . . . See if 25 cycle transformer has been installed (several New York chains sold sets of this type) and if so tighten transformer laminations or replace.

WESTINGHOUSE WR5, 6, 7, 8. Poor quality and low volume . . . Look for grounding of strip of resistors under chassis, lowering C bias to power tubes. Grounding occurs when heat expands resistors.



This Plan Brings PROSPECTS into Leonard SHOWROOMS

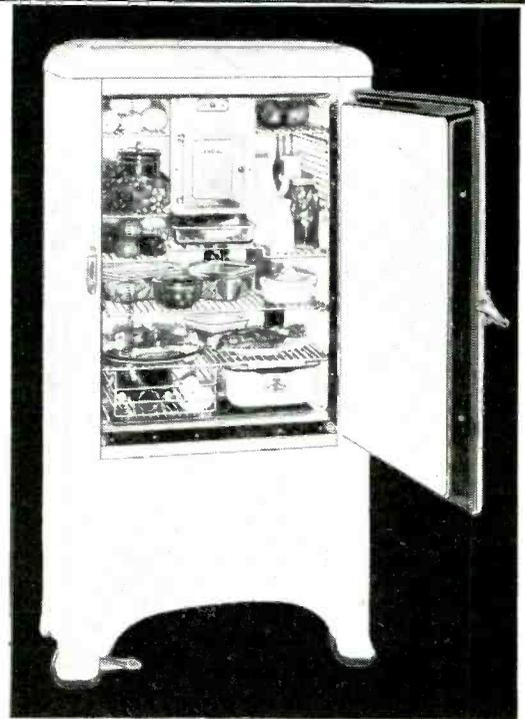
LEONARD'S great floor selling plan swung into action in March, and from every section of the country, dealers are reporting its spectacular success in bringing interested prospects to their showrooms.

Pictured above is an audience of three hundred and five women in an Ohio city, brought together by following the plan that is available for all Leonard dealers. Of these women, 257 signed cards giving their names and addresses, and 205 owned no electric refrigerator. Think of it—205 actual prospects reg-

istering with a dealer in a day!

Can you afford *not* to know more about this plan, which brings prospects, product and salesman together in the dealer's showroom? Combined with the finest line and greatest advertising program in Leonard history, it is setting new sales records month after month.

Let us show you how it operates—what it is producing—in scores of territories like your own. Write or wire the factory. LEONARD REFRIGERATOR COMPANY, 14259 Plym-outh Rd., Detroit, Mich.



(662)

LEONARD



THE COMPLETE REFRIGERATOR



Warning

See

FADA **first**

Behind locked doors the finishing touches are being put on the New Fada Radios...

A Fada destined to establish new standards in all-wave reception...

A Fada full of surprises for radio fans and full of profit for the wide-awake radio dealer...

A Fada line that will set sales records such as the industry hasn't seen in years...

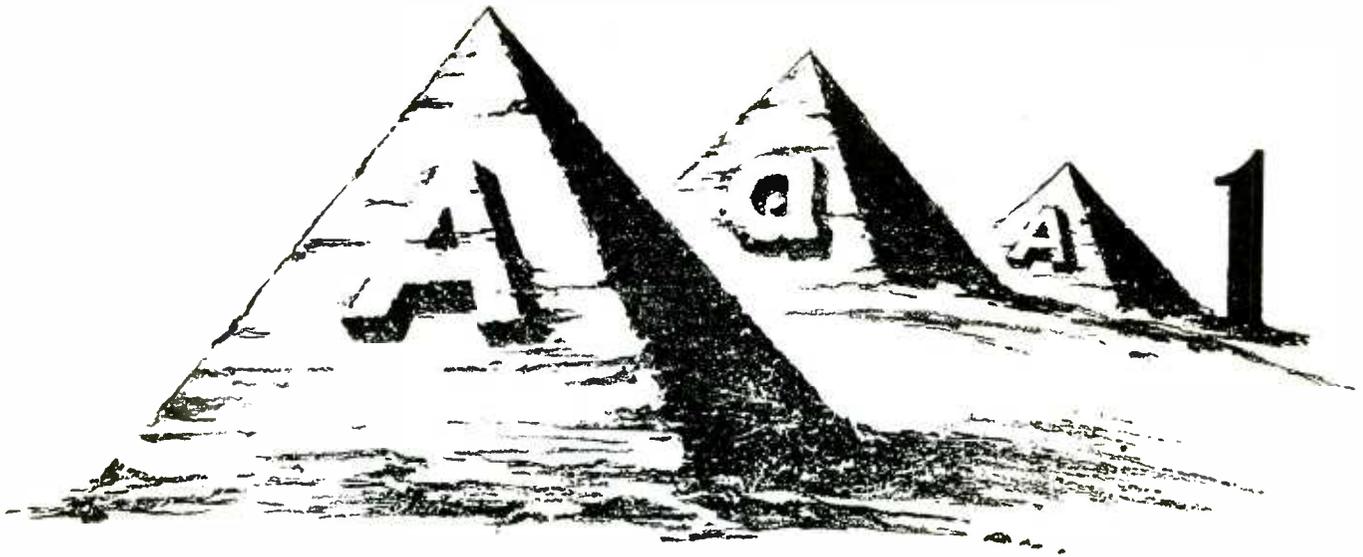
A Fada Radio worth waiting for!

Watch for the Big News - it will break soon!

FADA
R a d i o

FADA RADIO AND ELECTRIC CORPORATION, LONG ISLAND CITY, N. Y.

1920 . . . SINCE BROADCASTING BEGAN . . . 1934



UNCHANGING

IN THE past decade of fluctuating values, few old standards have remained unchanged. Almost alone in this respect, the financial ratings published by leading financial directories have stood as reliable standards of any organization's stability.

Throughout both booms and depressions, the financial rating of the Hygrade Sylvania Corporation has remained consistently AaA1! Hygrade Sylvania's farsighted engineering, fair dealer policies, and willingness always to cooperate with set manufacturers in solving circuit and design problems have proved

a sound basis for longtime, stable operation!

Add to this the Hygrade Sylvania Corporation's freedom from lost motion . . . and you get a business associate of the most desirable kind! The men who own the major portion of Hygrade Sylvania stock are all directly active in the management. They put the reputation of their company and the success of those who distribute its products . . . above all else!

A letter places you under no obligation. Write for product information. Hygrade Sylvania Corporation, Emporium, Penna.



Sylvania

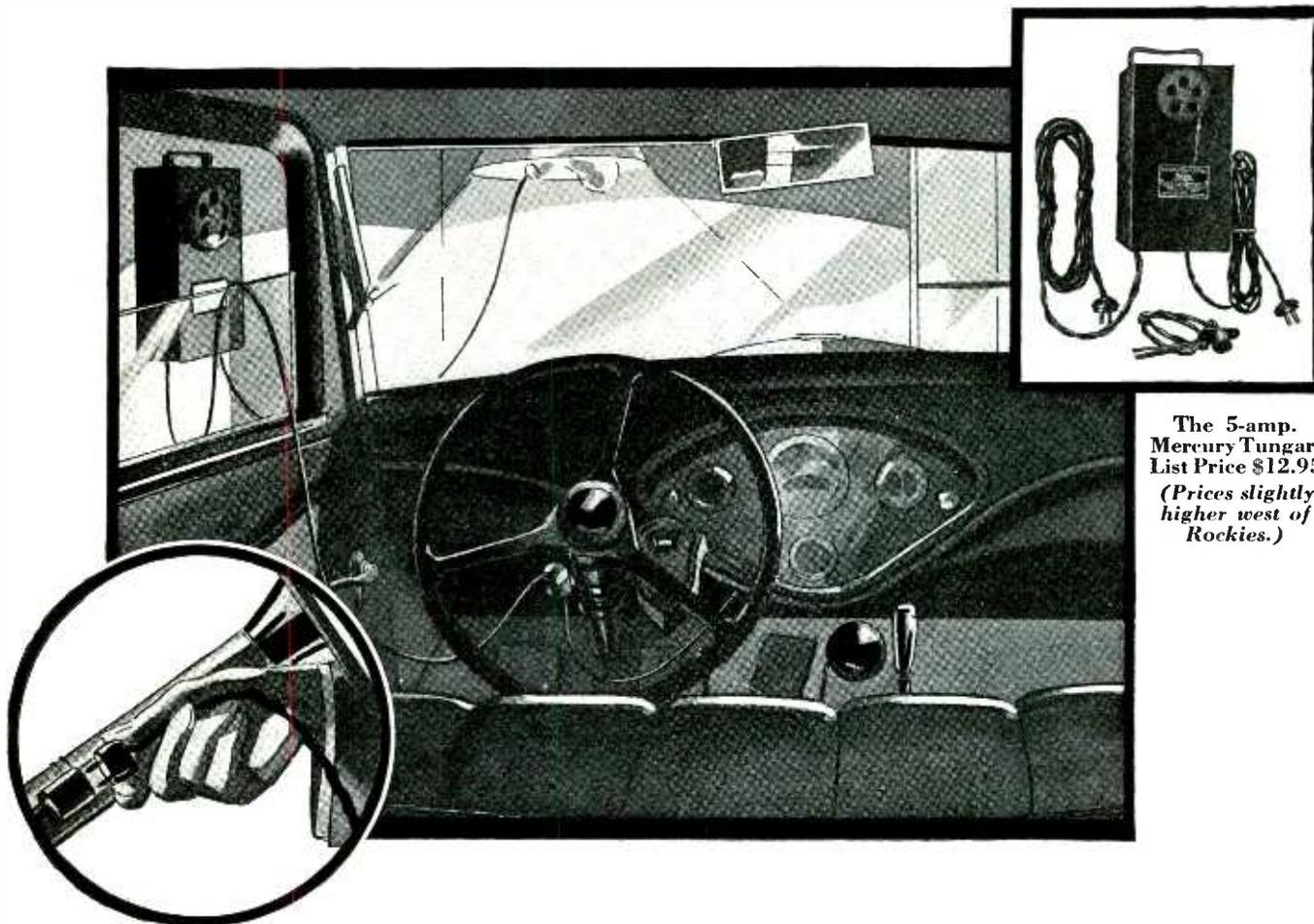
(Reg. U. S. Pat. Off.)



THE SET-TESTED RADIO TUBE

© 1933, H. S. C.

G-E TUNGAR *ELIMINATES* AUTO RADIO BATTERY TROUBLES



The 5-amp. Mercury Tungar. List Price \$12.95 (Prices slightly higher west of Rockies.)

Tungar is not a new name to the Radio Trade. It played a large part in the storage-battery days of Radio. Now Tungar introduces the 5-amp. Home Battery Charger. Use this new Tungar to assure protection of fully charged batteries on all Auto Radio installations.

You know that Auto Radios alone won't run-down car-batteries . . . but that it's the total of all the present-day accessories. Your customers don't realize that. The last thing they bought was an Auto Radio . . . now the battery is dead. Complaints pour in . . . the Auto Radio is blamed. But — if you eliminate the Customer's rundown battery, you eliminate this trouble. You can guarantee fully-charged car-batteries and better Auto Radio performance to every owner or prospective owner of an Auto Radio.

The 5-amp. Mercury Tungar operates in the home garage . . . plugs into any A-c. outlet. Wiring accessories furnished permit easy connection of Charger to battery through a

special outlet . . . no messy floor-boards to handle. For just a few cents, the Tungar operates safely all night. Batteries are given a noticeable boost. They are protected from power failure. Sell this Tungar to eliminate run-down batteries and to maintain the good performance of your Auto Radios. It is easy to install. The price is low. The 5-amp. Mercury Tungar, complete with wiring accessories, lists for \$12.95. (Prices slightly higher west of Rockies) For complete information, see your nearest G-E Merchandise Distributor, or mail the coupon below.

Section A-365, Merchandise Department,
General Electric Co., Bridgeport, Conn.
Please send me complete information on
the new 5-amp. Mercury Tungar.
Name.....
Address.....
City.....

GENERAL ELECTRIC

AUTOMOTIVE PRODUCTS

MERCHANDISE DEPARTMENT. GENERAL ELECTRIC COMPANY. BRIDGEPORT. CONNECTICUT

BURGESS *News*

BURGESS BATTERY COMPANY, FREEPORT, ILLINOIS

WINS SILVER DOLLAR NAME CONTEST with "POWER HOUSE"



H. W. Magruder
Columbian Electric Co.
Kansas City, Mo.

H. W. Magruder of Columbian Electric Co., Kansas City, Missouri, wins Burgess Name Contest and first prize of one hundred silver dollars. The prize winning name is "Power House", the prize winning letter:—"A safe, long life, low cost, dependable "A" power supply. This battery can be merchandised satisfactorily by any dealer assuring good service to the user."

BURGESS POWER HOUSE

The Burgess 400 Hour DRY "A" Battery will be known as the "Burgess POWER HOUSE" as soon as labels and catalogs can be changed. Retailing at \$3.20, the Burgess POWER HOUSE provides "A" power for 2-volt battery operated radios at less than 1¢ an hour. Its economy, dependability and convenience have established it as the ideal source of power for battery receivers.

Seven Choose "POWER HOUSE"

The Silver Dollar Name Contest was for jobbers' salesmen only. Fifteen "cartwheel" prizes were awarded, the first seven going to the men who submitted the name "Power House" (individual awards were made on the basis of contest letters). More than 1,700 names were received. The Burgess Battery Company extends its thanks to all who helped make the contest a success.

Silver Dollar Prizes

The fifteen cash prizes were paid in silver "cartwheels" as a sequel to the Burgess Silver Dollar Payroll which attracted nation-wide attention. Over \$40,000.00 in silver dollars was paid Burgess employees. To determine just where an industrial payroll goes, a survey was made to trace the spending of these silver dollars. A copy of this interesting survey will be mailed on request.



PARIS — LONDON — MADRID BERLIN or CARACAS

reception assured on

FRANKLIN'S

NEW MODEL 55 CU (19-55) (180-550) meters



R.C.A. LICENSED

LIST — \$37⁹⁵ STANDARD DISCOUNTS

AMAZING!

Day after day this receiver has brought in the above foreign stations with plenty of volume. A new circuit arrangement gives twice the power output of ordinary AC-DC sets. You, too, will say the performance is amazing.

FEATURES!

Dual Wave (19-55) (180-550) meters.
Illuminated calibrated dial.
Vernier tuning
Dynamic speaker
AC or DC.

UNBELIEVABLE!

FEATURES!

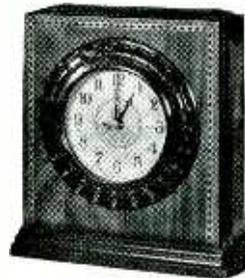
Hand rubbed walnut cabinet.
Ventilated top
Exclusive booster circuit doubling output.
37 microfarads of filter
Uses Raytheon 6A7, 6B7, 78, 43, 2525 tubes.

THE FRANKLIN RADIO CORP.

FACTORY—DAYTON, OHIO—EASTERN SALES—250 E. 43d ST., NEW YORK

INQUIRIES FROM RATED JOBBERS SOLICITED

The Clock that Thinks



The new improved CLOK-TROLA turns your radio or other appliances on and off *automatically*—simply by switching any number of keys—each key a 30-minute period. Powered with Hammond motor; silent, perfect time. Beautiful walnut case. Will control 350-watts.

Distributors and Dealers write for information on

CLOK-TROLA

LIST PRICE \$9.75

ADVANCE ELECTRIC CO., Inc.
1260 W. 2nd St., Los Angeles

A.C. CURRENT ANYWHERE

with Kato AC Electric Plants

All A.C. Models self cranking—Generates 110 Volts, 60 Cycles A.C. \$130.00 and up.

Dealers: every non-electrified dwelling is a prospect. Plant sales net you substantial profits.

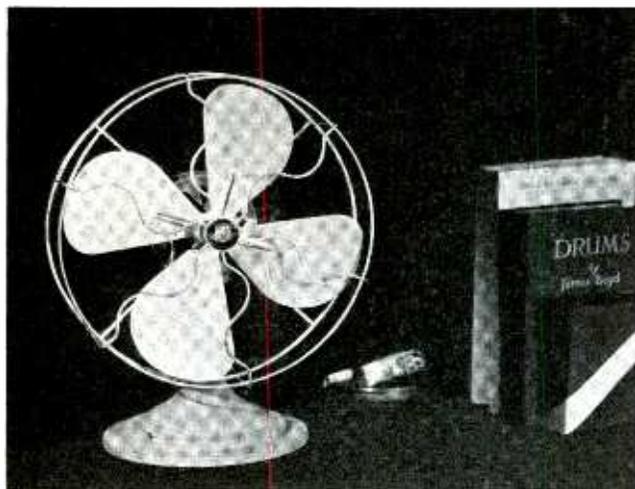


Creates Potential buyers for electrical appliances. Sizes 300 to 5000 watts. Operates Radio, Refrigerators, etc. Ideal for sound trucks. Supplies D.C. for speakers. YOU CAN BUY THROUGH YOUR JOBBER

Write for interesting descriptive literature.

KATO ENGINEERING CO.
Mankato, Minnesota,
U. S. A.

Fast profit-makers...these Stancor fans



STANCOR 10"
Oscillating
Fan

LIST

\$6.50

WITH
APPROVED
SWITCH

Fans generally are the fastest-moving types of merchandise you can handle. Such capital as you may invest in them, frequently returns to you faster than your obligation to pay. So, even though the profits per unit were less, they would still represent a better margin of profit than most things you sell.

STANCOR Fans are unusually profitable. For one thing, they carry the same discounts to which you are accustomed—the regular radio replacement parts discounts. You do not have to rearrange your selling set-up.

STANCOR Fans are priced so that you have no apologies to make or price resistance to overcome, and, STANCOR Fans are feature fans . . . planned and engineered to make them the outstanding fans of 1934.

STANCOR Fans are made with eye-appeal . . . artistically modeled bases and motor housings finished in Ice-Green crackle . . . oversize phosphor-bronze bearings constantly lubricated from a specially designed oil-well. This oil-well contains the

oil, and a wick surrounded by a coiled hairspring that keeps the wick in continual contact with the shaft . . . 3900 constant hours of running by stock models is ample evidence of the efficiency of STANCOR Fans.

STANCOR blades are designed for the maximum air delivery at their R.P.M.

A line that includes 8" and 10" oscillating and non-oscillating types, with or without switches; all equipped with approved cords, completes a picture of fan sales and profits that should

fit into your selling plans most admirably.

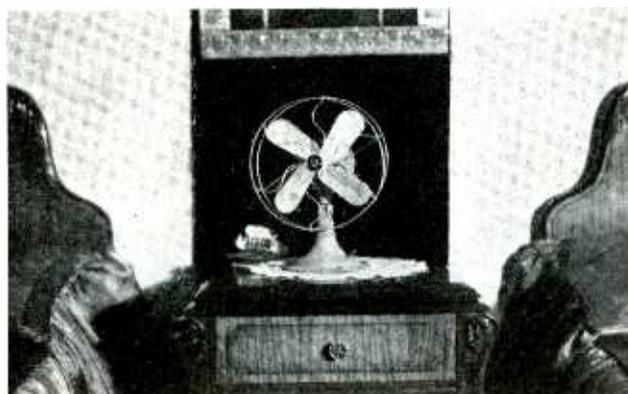
STANCOR Fans are distributed by authorized STANCOR distributors all over the United States, Canada and our Island possessions. Ask us or your distributor for the 3 color 4 page STANCOR fan bulletin, showing the fans in color and containing all the information you will need in making up your sample order for the immediate business that breaks with the first hot spell. For, when it gets hot, people want fans then, not later.

STANCOR 8"
Oscillating Fan
equipped with
approved switch.

LIST

\$4.95

WITH
APPROVED
SWITCH



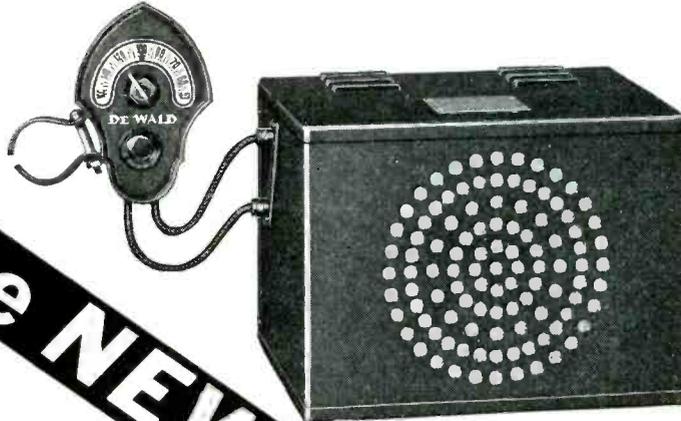
STANDARD TRANSFORMER CORPORATION

852 Blackhawk Street, Chicago, U. S. A.

SALES OFFICES: Chicago, New York, St. Louis, Boston, Detroit, Montgomery, Ala., New Orleans, Los Angeles, San Francisco, Portland, Ore., Dallas, Tex., Denver, Minneapolis, Kansas City, Mo., Cleveland, Philadelphia, Pittsburgh, Buffalo, Cedar Rapids, Ia.

At last!

TROUBLE-PROOF AUTO RADIO



THESE FEATURES:

6 tube hi-gain superheterodyne circuit. Full automatic volume control. Large dustproof dynamic speaker with console tone. Full vision steering post remote control. Positive improved vibrator. Quick detachable aerial, ground, and battery leads. 6 cylinder suppressors.

Perfect reception ANYWHERE. Every part IMPROVED. New and astounding in construction and performance. Simplified installation. Get the dope on this revolutionary set NOW!

\$39⁹⁵

PIERCE-AIRO, INC.
520 Sixth Ave., N. Y.
Makers of Fine Radio Receivers Since 1921
Not connected with the Pierce-Arrow Motor Car Company.

DEWALD

The Greatest **RADIO DEVELOPMENT SINCE THE INVENTION OF VACUUM TUBES**



Here's the big Radio news of the year—a totally new kind of Battery Radio! Uses no "B" and "C" Batteries, operates entirely from a regular 6-volt automobile battery. Lowest operating expense of all—average actual cost, less than One Cent a day. And, the brilliant performance of this new Radio is amazing—clear, true tone—powerful volume—it has everything!

L. Tatro 6 volt Farm Radio

DEALERS—DISTRIBUTORS! By all means get complete information about this revolutionary Radio at once—it is the real profit maker of the year! Just sign and mail this advertisement—at no obligation of course.

L. TATRO PRODUCTS CORPORATION
Mfrs. of the Original 32-Volt Farm Light Plant Radio
DEPT. 65, DECORAH, IOWA

Name

Address



ANTENEX
INDOOR RADIO AERIAL

Eliminates all outside wires
Reduces static—
Eliminates all noise—
interference

Millions of radio sets have aerials that need replacement. Money's to be made in "renovizing" aerials. ANTENEX, a guaranteed indoor aerial can be sold easily in the store and by service men. Write us, too, for prices on Auto Radio Aerials, also insulators, lead-ins and NEW Short Wave Antenna.

Retails for **\$1**

M. M. FLERON & SON, INC.,
113 Broad St., Trenton, N. J.

A.C. ELECTRIC GENERATING PLANTS

ONAN ALTERNATING CURRENT ELECTRIC PLANTS furnish the same current as city service—110 volt, 60 cycle, A.C. Operate Radios, Water Systems, Refrigerators, all household appliances.

Sizes 300 to 50,000 Watts

Operate on Gasoline, Gas or Distillate. No battery used except to start engine. Ideal for places remote from electric service. For Public Address, Sound Amplifications, Portable Lighting and Standby Equipment.



Also a complete line of D.C. Models.

Some Dealer's Territory Available.

D. W. ONAN & SONS

274 Royalston Ave., Minneapolis, Minn.

What has cotton to do with radio tubes?



By eliminating costly hand-picking, Eli Whitney's cotton gin (1834) laid the cornerstone of the American textile industry.



JUST as pioneering genius in the cotton industry helped civilization to progress, so Arcturus' fundamental developments stimulated the progress of radio. Six out of the seven advances in a. c. tubes were *pioneered* by Arcturus.

With this unmatched record as a background, Arcturus has consistently built a tube that is accepted as *the* quality standard of the industry by critical engineers.

As a reliable radio dealer, you must sell a tube that you can safely recommend—that will assure satisfied customers—that will put the tube end of your business on a stable and profitable basis.

That tube is Arcturus. Its quality means ready consumer acceptance; its performance insures repeat customers; its clean-cut sales policy assures stable profits. Thousands of dealers in the U. S. and in 78 foreign countries know this—why not you? Ask your distributor for the details. Arcturus Radio Tube Company, Newark, N. J.



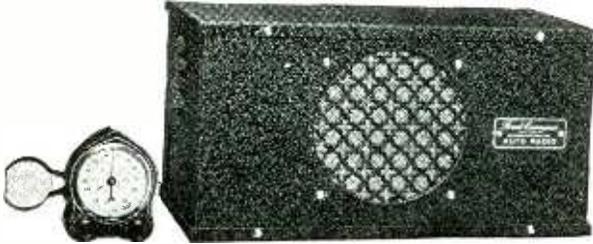
ARCTURUS

R A D I O T U B E S

Famous Since
Broadcasting Began

Freed-Eisemann

NEW 6 TUBE AUTOMOBILE RADIO

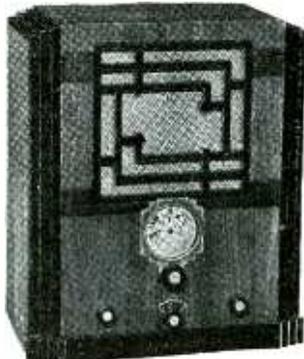


MORE AUTO RADIO SETS WILL BE SOLD THIS YEAR THAN EVER BEFORE. GET YOUR SHARE OR PROFITS THIS SUMMER, with High Quality Sets.

MODEL 464—6 tube All Electric Superheterodyne Auto Radio; Large Dynamic Speaker; Single hole mounting; 3 Watts output; full vision airplane tuning dial, complete with suppressors, etc. \$59.90

ALL WAVE RADIO

MODEL 367 — 6 tube AC 4 band All Wave Superheterodyne. Tunes all stations from 14 to 500 meters. Full vision airplane dial with 4 calibrated scales printed in colors to show location of foreign broadcasts; Large Dynamic Speaker, attractive Walnut Veneer Cabinet. Price, complete, \$59.50



Write for further details of these new remarkable sets and details of complete line.

Special line of export models available for long and short wave bands.

FREED TELEVISION AND RADIO CORPORATION
LONG ISLAND CITY, NEW YORK
EXPORT DIVISION—115 Broad Street, New York
Cable Address: CAMRADIO

ARKAY Radio

Manufacturers of
MIDGETS, AUTOMOBILE, CONSOLE
AND SPECIAL RADIOS
R. C. A. LICENSED
R. K. RADIO LABORATORIES, INC.
6312 Northwest Highway Chicago, Ill., U. S. A.
Tel. Newcastle 4040 Cable Address: Arkay Chicago

inseparables . . .

mutt and jeff . . . ham and eggs
. . . scotch and soda . . . pat and
mike . . . JUNE RMA
CONVENTION and JUNE
RADIO RETAILING'S
SPECIAL ISSUE.

In JUNE

"THE CONVENTION AND SALES PROMOTION ISSUE" of Radio Retailing

FOR the past decade June has been set aside in the radio industry for conventions and sales planning. Next month will be no exception. The Radio Manufacturers Association will in Chicago, from June 11th to 14th, celebrate its Tenth Anniversary with a joint meeting with the Radio Wholesalers' Association, which in turn will celebrate its great triumph—the signing of the Radio Wholesalers' Code.

Radio Retailing, to tie in with this joint meeting and celebration will issue a special June "Convention and Sales Promotion Number." Featured in this special issue will be the new plans that the radio industry is developing to put its business on an organized, stable basis. The "five-point" radio industry sales plan, with a program for intensive sales promotion, will be fully covered in *Radio Retailing's* special June "Convention and Sales Promotion Issue"—an issue that will be studied with genuine interest by the men receiving the 20,200 copies of this number.

THIS June there will be no Trade Show in connection with the RMA Convention. Emphasis on new models of sets, tubes, accessories and parts will probably not come until the fall. Essentially June will be a sales-planning time. Hence manufacturers of radio and allied products sold by the radio trade have a very specific advertising opportunity in the June issue of *Radio Retailing*. They have a chance to tell their plans for sales promotion—their plans to give radio dealers and distributors a chance to make a lasting profit. Merchandise, to be sure, fits into this story of sales promotion, but paramount in importance should be the manufacturer's story of sales planning for his wholesale and retail outlets.

We'll be glad to discuss with manufacturers and their advertising counsellors ways and means of capitalizing the advertising opportunities in *Radio Retailing's* June "Convention and Sales Promotion" Issue.

Radio Retailing

a McGraw-Hill publication

MEMBER OF THE ABC AND ABP

330 West 42nd St., New York, N. Y.

SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

UNDISPLAYED—RATE PER WORD:
Positions Wanted (full or part-time salaried employment only). 10 cents a word, minimum \$2.00 an insertion, payable in advance. (See ¶ on Box Numbers.)
Positions Vacant and all other classifications. 15 cents a word, minimum charge \$3.00.
Proposals. 40 cents a line an insertion.

INFORMATION:
 Box numbers in care of our New York, Chicago and San Francisco offices count 10 words additional in undisplayed ads. Replies forwarded without extra charge.
 Discount of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

DISPLAYED—RATE PER INCH:
 1 inch \$7.50
 2 to 3 inches 7.25 an inch
 4 to 7 inches 7.00 an inch
Rates for larger spaces, or yearly rates, on request.
 An advertising inch is measured vertically on one column, 3 columns—30 inches—to a page. Radio Retailing

MICROPHONE REPAIRS

Any make completely rebuilt. New dural diaphragm, buttons, grains, etc. Missing parts and re-plated where necessary. Response curve, sensitivity and wave shape guaranteed equal or better than new. 24 hour service. Net price \$6.50.

ELECTRO-VOICE MFG. CO., Inc.
 324 E. Colfax Ave., South Bend, Ind.

DEALERS and SERVICE MEN

Genuine Grebe factory made parts in stock for all model Grebe receivers manufactured prior to 1933. Power transformers for sets using from 4 to 12 tubes. Also audio transformers and filter chokes. Write for descriptive data and parts price list.

GREBE RADIO SALES & SERVICE CO.
 137-28 Jamaica Ave., Jamaica, N. Y.
 (Owner former Gen. Fact. Mgr. of A. H. Grebe & Co., Inc.)

SERVICEMEN-DEALERS

"Send for our Handbook and Catalog"
 Complete Stock of NEW Radio Replacement Parts
 Hard to Get Parts in Stock
 Power Packs and Speakers Repaired
GRANT RADIO LABORATORIES
 6521-R South Halsted St., Chicago, Ill.

SEARCHLIGHT SERVICE

Covers the Advertising of

- Agencies Wanted
- Agents Wanted
- Auction Notices
- Bids Wanted
- Books and Periodicals
- Buildings for Sale
- Business Opportunities
- Civil Service Opportunities
- Contracts to Be Let
- Contracts Wanted
- Educational
- Employment Agencies
- Foreign Business
- For Exchange
- For Rent
- Franchises
- Labor Bureaus
- Machinery Wanted
- Partners Wanted
- Patent Attorneys
- Patents for Sale
- Plants for Sale
- Positions Vacant
- Positions Wanted
- Property for Sale
- Proposals
- Receivers Sales
- Representatives Wanted
- Salesmen Wanted
- Second Hand Equipment
- For Sale For Rent
- Exchange Wanted
- Specialties
- Tutoring
- Miscellaneous For Sale. For Rent and Wanted

Address

Departmental Advertising Staff
 McGraw-Hill Publications
 330 West 42d Street, New York

SPECIAL NOTICE

To the Radio Industry

Advertising in connection with legitimate offers of surplus stocks and discontinued models of radio merchandise is acceptable in this section of "Radio Retailing."

Extreme care will be exercised by the publishers to prevent the use of advertising in the Searchlight Section to encourage price cutting on current models of merchandise or equipment. Nor will advertising which invites violation of the dealer's contract with the manufacturer be acceptable.

All merchandise offered in the Searchlight Section must be accurately and fully described and must be available on order.

POSITIONS WANTED

SERVICEMAN. 7 years' experience. Go anywhere in or near N. Y. State. Soloway, 406 Joseph Ave., Rochester, N. Y.

SERVICE man desires position. 8 years on old makes. Own equipment. Anywhere. PW-190. Radio Retailing, 520 No. Michigan Ave., Chicago, Ill.

REPRESENTATIVE AVAILABLE

Representative Available
 If interested in representation in the market served through Shanghai write James Francis, care American Express, Shanghai, China. Amply financed.

FOR SALE

INVENTION—Chronomatic pre-selection radio tuner. Patent applied for. D. L. Grubb, 185 North Balph Ave., Bellevue Station, Pittsburgh, Pa.

AGENTS WANTED

Sell Rebuilding Service on Instruments (see advertisement this issue)

PRECISION APPARATUS CORP.
 821 E. New York Avenue, Brooklyn, N. Y.

SERVICEMEN!

REDUCE THE HIGH COST OF KEEPING UP-TO-DATE



Here in one inexpensive 28-lesson post-graduate course — the only one prepared exclusively for active servicemen — Sprayberry gives ALL the dope on modern radio servicing. Covers every detail — Testing, Repairing (AVC, short wave, all wave, auto radio, P.A., etc.); Parts Testing and Trouble Shooting — also tubes, modernizing set analyzers and selling. No "fluff" mathematics or costly bindings — just a practical, how-to-do-it course that will save hours of reading in scattered sources. Only \$10 for course alone or \$15 with personal instruction and answers to questions by Mr. Sprayberry. Money back guarantee. Write for FREE details!

INSURE YOUR FUTURE

As in any line of endeavor, there are too many servicemen. And, also as in any other line, most of them are trudging along in the great army of mediocrity. Enduring success comes to those who look ahead — who insure themselves of a lion's share of the business by being prepared to handle it better than the other fellow.

Don't wait. Get this course now. Study this Summer — be prepared to forge ahead this fall!

F. L. SPRAYBERRY

132 Bryant St., N.W., Washington, D. C.

RADIO ENGINEERING

broadcasting, aviation and police radio, servicing, marine radio telegraphy and telephony. Morse telegraphy and railway accounting taught thoroughly. Engineering course of nine months' duration equivalent to three years of college radio work. School established 1874. All expenses low. Catalog free.

Dodge's Institute, Earl St., Valparaiso, Ind.

FREE 1934 WHOLESALE RADIO CATALOG

Radio Replacement Parts, Sets, Tubes and Electrical Appliances at great savings.

WHOLESALE MERCHANTISERS, Inc.
 624 Broadway, - - New York City

ACTUAL TROUBLES IN COMMERCIAL RADIO RECEIVERS

By Bertram M. Freed

JOBBERS! DISTRIBUTORS!

This book is a necessity for the up-to-date serviceman.

Write for our attractive discount proposition.

SERVICEMEN'S PUBLISHING CO.

136 Liberty St., New York, N. Y.





THE INTERNATIONAL KADETTE AUTO Radio

AFTER two years' intensive experimentation, Kadette now announces its new auto radio—incorporating entirely new and extraordinary features, with unsurpassed tone quality and performance.

First—the chassis is mounted in a metal drawer that slides out for servicing while radio is operating. Handsome black crystal finished rust-proof, all-steel cabinet. Three-position mounting.

Second—a new type completely dynamic *dust-proof* speaker—extra large (6½-inch). Tone control.

Third—latest type plug-in “B” supply vibrator—replaces as easily as a tube.

The circuit is the most advanced type six-tube super-heterodyne of exceptional range and power. Full automatic volume control giving steady performance under all conditions.

International engineers have a nationwide reputation for building “punch” in radio circuits—an ability of genuine importance in the design and construction of an automobile set. Dealers desiring the satisfaction of selling a car radio that will perform—and keep on performing—will feature the Kadette.

Completely equipped with remote control and illuminated airplane type dial, clamps to the steering column or dash. Easy, single-hole mounting.

Write or wire for details. This will be the big seller of 1934.

LIST PRICE —

*Completely installed
including suppressors*

\$49.50

INTERNATIONAL RADIO CORPORATION
ANN ARBOR, MICHIGAN

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Printed by The Schweinler Press, N. Y.

Streamline Beauty

Captivates American housewives and brings quick, easy profits to Crosley dealers . . .



Ventilated Front
This feature of all Crosley models permits cool air to be drawn from the front and warm air expelled from the rear, properly ventilating power unit even when refrigerator is placed in limited space or close to wall.

**T H E
N E W**



provides about 50% more "usable" storage capacity

ALL of the new Crosley models—both Shelvador Series and Tri-Shelvador Series—feature the now famous Shelvador. When the Shelvador—an exclusive and patented Crosley feature—was first presented to the American housewife over a year ago, it created the greatest sensation in the history of home electric refrigeration.

Increases "Usable" Capacity About 50%

Shelvador increases the "usable" food storage space about 50%. It provides a definite place for small items. As an example: in the Shelvador, an orange occupies exactly the space that an orange should—not the space of a bottle of milk.

Now Comes "Streamline Beauty"

All of these new Crosley Shelvador and Tri-Shelvador models are *streamlined*. They fulfill the dream of every woman for a refrigerator that does justice to her home, her kitchen, and can be a daily source of pride—can be "lived with" as well ten years from now as today.

Compare These Features

First comes Shelvador, then the ventilated front, automatically illuminated interior, no-stop defrosting control (defrosts while refrigerator is operating), chromium plated stamped brass hardware of modern design, thorough insulation throughout (including door), round cornered porcelain interior, white lacquer exterior with black trimming, ample tray capacity for quick freezing of ice cubes.



Model EA-13

4.3 cu. ft. NET capacity, 9.15 sq. ft. shelf area, 2 ice trays—42 cubes—one double depth tray.

\$117.00



Model EA-55

5.5 cu. ft. NET capacity, 11.6 sq. ft. shelf area, 3 ice trays—63 cubes—one double depth tray.

\$145.00

\$99.50

MODEL EA-35

This Crosley Shelvador has a NET capacity of 3.5 cubic feet with a shelf area of 7.5 square feet. It is equipped with two 21-cube ice trays—42 cubes in all. It incorporates all of the Shelvador Series features described to the right. Dimensions: 48¹¹/₁₆" high, 23³/₈" wide, 24¹/₁₆" deep.

ALL MODELS HAVE AUTOMATICALLY ILLUMINATED INTERIOR

ADDS THREE ADDITIONAL EXCLUSIVE FEATURES TO THE FAMOUS SHELVADOR



IN addition to all of the outstanding features of the Crosley Shelvador Series described above, the Crosley Tri-Shelvador Series incorporates three additional features never before combined in a home electric refrigerator.

1—THE SHELVATRAY . . . When articles are wanted from the refrigerator, place Shelvatray in a horizontal position, place the articles on it and carry them, Shelvatray and all, to table, range or cabinet. Shelvatray (patent pending) is an exclusive Crosley feature.

2—THE SHELVABASKET . . . Handy for greens, carrots, cabbages, canned goods and the like. Another exclusive Crosley feature. Swings with the door. Shelvabasket is not refrigerated. (Patent pending.)

3—THE STORABIN . . . A place for potatoes, onions and other bulky items. Exclusive with the Tri-Shelvador. Storabin is not refrigerated. (Patent pending.)

In addition to these, the Tri-Shelvador models are equipped with a self-closing porcelain door to the freezing chamber. Model E-55 Tri-Shelvador (right) has 5.5 cu. ft. NET capacity, 11.6 sq. ft. shelf area, 3 ice trays—63 cubes—one double depth tray. You must see the new Crosley Shelvador and Tri-Shelvador electric refrigerators to appreciate fully the advancement in refrigerator design, convenience and performance that they represent. See your Crosley distributor—ask him to show you both series—make every comparison that occurs to you—your good judgment will then dictate which electric refrigerator to handle. *All models available in full porcelain at slight extra cost.*



Model E-13

4.3 cu. ft. NET capacity, 9.15 sq. ft. shelf area, 2 ice trays—42 cubes— one double depth tray.

\$135.00



Model E-70

7 cu. ft. NET capacity, 14.9 sq. ft. shelf area, 4 ice trays—84 cubes— one double depth tray.

\$185.00



Model E-55

\$157.50

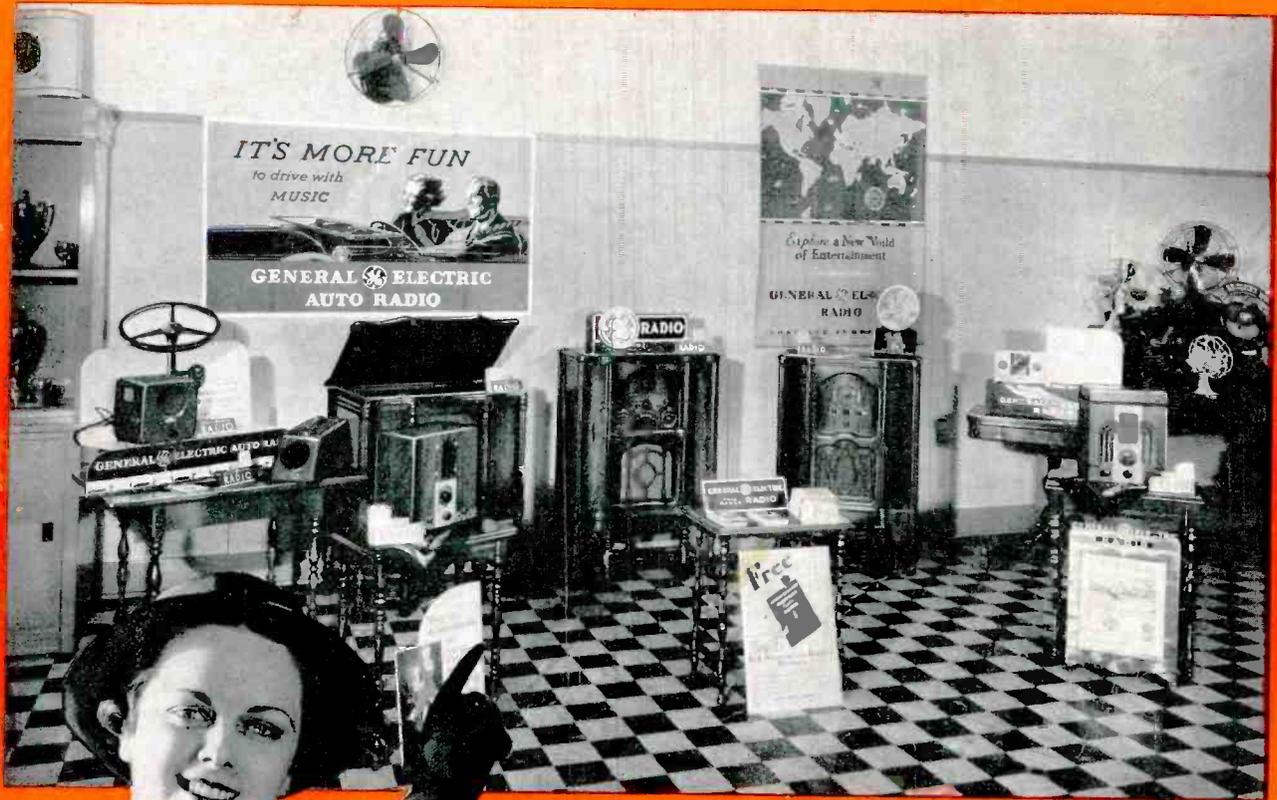
The Crosley Radio Corporation - Cincinnati

(Pioneer Manufacturers of Radio Receiving Sets)

POWEL CROSLY, Jr., President

Home of "the Nation's Station"—WLW

ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE



“Interiors like this help sell me a G-E RADIO!”

DOES a clean, well-lighted interior please a customer? *You bet!*

Do G-E displays make an attractive radio display? *You bet!*

Does spot-lighting G-E Radios with display material help make sales? *You bet!*

So dramatize your G-E sets in interior displays—using the handsome G-E display cards to help.

Feature G-E Short-wave Radio

in your local newspaper advertising. Hang out the G-E monogram—show people where to buy G-E sets. Put G-E displays in your window. Follow the G-E sales plan. You'll make sales—you'll make money in the big G-E Radio push.

See your G-E distributor for details, or write the General Electric Co., Sec. R-365, Merchandise Dept., Bridgeport, Conn.



Model M-68 — G-E's newest de luxe model — a Dual-wave radio-phonograph combination. Housed in a beautifully finished cabinet of walnut and carved oriental woods. Retail for \$139.50. Prices slightly higher in West, Mid-west and South. Subject to change without notice. *“Now is the time to buy”*

GENERAL  ELECTRIC RADIO